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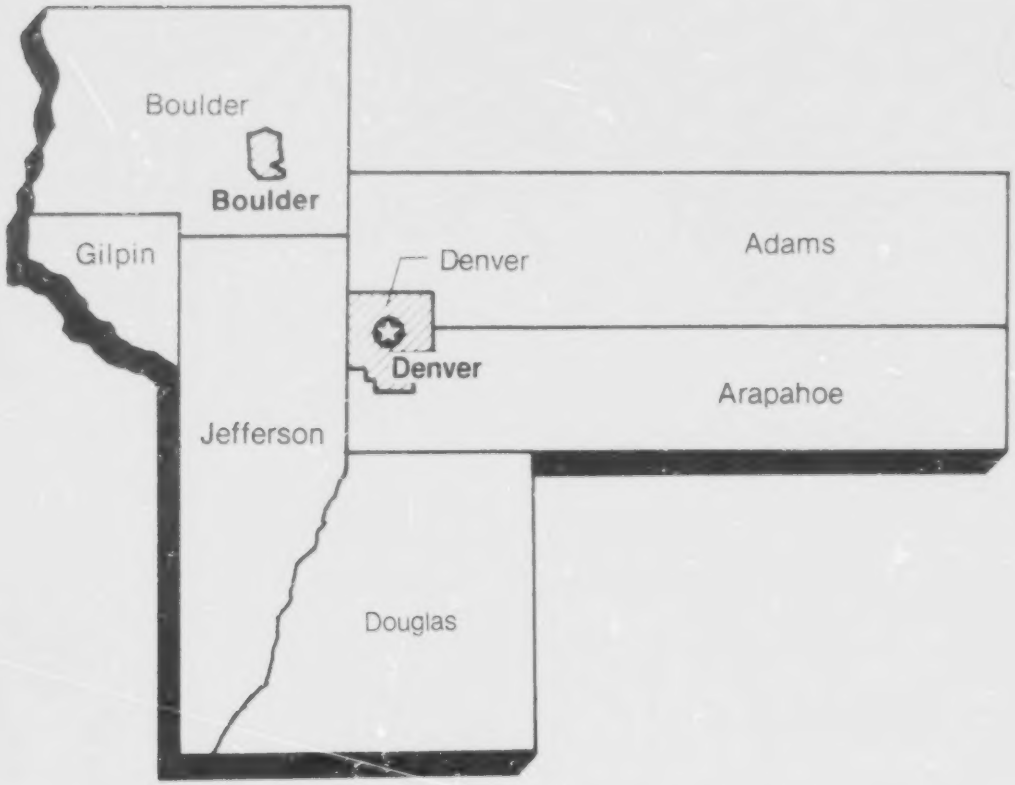
Area Wage Survey

Denver-Boulder, Colorado, Metropolitan Area December 1985

U.S. Department of Labor
Bureau of Labor Statistics

Bulletin 3030-67

ORIGINAL



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Preface

This bulletin provides results of a December 1985 survey of occupational earnings in the Denver-Boulder, CO, Standard Metropolitan Statistical Area. The survey was made as part of the Bureau of Labor Statistics' annual area wage survey program. It was conducted by the Bureau's regional office in Kansas City, MO, under the general direction of Edward Chaiken, Assistant Regional Commissioner for Operations. The survey could not have been accomplished without the cooperation of the many firms whose wage and salary data provided the basis for the statistical information in this bulletin. The Bureau wishes to express sincere appreciation for the cooperation received.

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Note:

Reports on occupational earnings and employee benefits are available for the following industries: Banking (December 1985), hospitals (August 1985), and nursing and personal care facilities (September 1985). These reports are available from the Bureau's Regional Offices. Regional Offices also have available five summary releases: *Occupational Earnings and Wage Trends in Metropolitan Areas* (3 parts); *Occupational Earnings in All Metropolitan Areas* (combined); and *Wage Differences Among Metropolitan Areas.*

A summary bulletin, *Area Wage Surveys, Selected Metropolitan Areas,* provides wage data for 70 areas in the Area Wage Survey program. This annual bulletin may be purchased from the Superintendent of Documents or from the BLS Publications Sales Center in Chicago.

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Area Wage Survey

Denver-Boulder, Colorado, Metropolitan Area December 1985

U.S. Department of Labor
William E. Brock, Secretary

Bureau of Labor Statistics
Janet L. Norwood, Commissioner
February 1986

Bulletin 3030-67

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Introduction

This area is 1 of 70 in which the U.S. Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related benefits. (See list of areas on inside back cover.) In each area, earnings data for selected occupations (A-series tables) are collected annually. Information on establishment practices and employee benefits (B-series tables) is obtained every third year. This report has no B-series tables.

A major consideration in the area wage survey program is the need to describe the level and movement of wages in a variety of labor markets, through the analysis of (1) the level and distribution of wages by occupation, and (2) the movement of wages by occupational category and skill level. The program develops information that may be used for many purposes, including wage and salary administration, collective bargaining, and assistance in determining plant location. Survey results also are used by the U.S. Department of Labor to make wage determinations under the Service Contract Act of 1965.

A-series tables

Tables A-1 through A-6 provide estimates of straight-time weekly or hourly earnings for workers in occupations common to a variety of manufacturing and nonmanufacturing industries. Where possible, occupations with related duties (e.g. accounting clerks and payroll clerks) are clustered to facilitate comparison. The occupations are defined in appendix B. For the 31 largest survey areas, tables A-12 through A-17 provide similar data for establishments employing 500 workers or more.

Table A-7 provides indexes and percent changes in average hourly earnings for office clerical workers, electronic data processing workers, industrial nurses, skilled maintenance trades workers, and unskilled plant workers. Where possible, data are presented for all industries and for manufacturing and nonmanufacturing separately. Data are not presented for skilled maintenance workers in nonmanufacturing because the number of workers employed in this occupational group in nonmanufacturing is too small to warrant separate presentation. This table provides a measure of wage trends after elimination of changes in average earnings caused by employment shifts among establishments as well as turnover of establishments included in survey samples. For further details, see appendix A.

Tables A-8 through A-11 provide measures of pay relationships in establishments. These measures may differ considerably from the pay relationships of overall area averages published in tables A-1 through A-6. See appendix A for details.

Appendixes

Appendix A describes the methods and concepts used in the area wage survey program and provides information on the scope of the survey.

Appendix B provides job descriptions used by Bureau field representatives to classify workers by occupation.

Table A-1. Weekly earnings of office workers in Denver-Boulder, CO, December 1985

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[1]	Median[2]	Middle range[2]	160 and under 180	180 – 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 500	500 – 520	520 – 560	560 – 600	600 and over
Secretaries	3,407	39.5	381.00	366.00	322.50– 434.00	–	2	4	32	87	141	259	292	366	410	341	218	226	260	204	140	92	129	98	52	54
Manufacturing	1,367	40.0	386.00	370.50	326.00– 439.50	–	–	–	8	25	53	113	99	151	149	138	115	68	128	50	65	48	71	43	29	14
Nonmanufacturing	2,040	39.5	378.00	362.00	319.00– 428.00	–	2	4	24	62	88	146	193	215	261	203	103	158	132	154	75	44	58	55	23	40
Transportation and utilities	474	39.5	410.50	419.00	346.00– 448.50	–	–	–	–	1	6	20	41	41	62	21	13	33	68	68	29	12	22	12	7	18
Secretaries I	342	39.5	334.50	311.50	285.00– 369.50	–	–	–	10	21	39	65	66	31	19	19	5	16	28	1	1	3	5	7	4	2
Manufacturing	59	40.0	314.50	306.50	268.50– 354.50	–	–	–	3	11	5	10	3	8	7	4	2	4	2	–	–	–	–	–	–	–
Nonmanufacturing	283	39.0	339.00	311.50	290.00– 370.00	–	–	–	7	10	34	55	63	23	12	15	3	12	26	1	1	3	5	7	4	2
Secretaries II	830	39.5	341.00	328.50	298.50– 375.00	–	2	3	13	42	41	111	139	106	123	56	23	40	66	53	3	3	5	1	–	–
Manufacturing	365	40.0	343.00	321.50	294.00– 389.00	–	–	–	–	5	30	80	61	43	29	22	11	8	59	7	3	3	3	1	–	–
Nonmanufacturing	465	39.0	339.50	339.00	306.00– 368.50	–	2	3	13	37	11	31	78	63	94	34	12	32	7	46	–	–	2	–	–	–
Transportation and utilities	172	39.5	374.50	354.50	323.50– 444.50	–	–	–	–	1	4	7	25	24	26	8	6	20	4	45	–	–	2	–	–	–
Secretaries III	1,172	39.5	374.50	365.00	335.00– 407.50	–	–	1	2	13	39	45	57	189	175	191	141	94	53	58	35	34	25	10	6	4
Manufacturing	585	40.0	383.50	369.00	341.00– 410.00	–	–	–	–	–	3	6	31	98	91	104	83	37	27	24	26	27	18	8	2	–
Nonmanufacturing	587	39.5	366.00	361.00	329.50– 401.00	–	–	1	2	13	36	39	26	91	84	87	58	57	26	34	9	7	7	2	4	4
Transportation and utilities	95	40.0	387.50	346.00	327.00– 440.00	–	–	–	–	–	2	4	10	14	24	6	2	–	10	8	3	2	5	1	–	4
Secretaries IV	784	39.5	427.00	423.00	368.50– 474.00	–	–	–	–	–	5	32	23	37	81	69	41	63	108	80	65	30	58	39	31	22
Manufacturing	276	40.0	455.50	461.50	408.00– 507.00	–	–	–	–	–	–	11	1	1	22	6	19	18	38	16	36	13	48	19	18	8
Nonmanufacturing	508	39.5	411.50	406.00	352.50– 454.00	–	–	–	–	–	5	21	22	36	59	61	22	45	70	64	29	17	10	20	13	14
Transportation and utilities	138	39.5	434.00	434.00	423.00– 468.50	–	–	–	–	–	–	–	1	2	12	6	3	9	53	14	19	6	9	2	2	–
Secretaries V	194	39.5	517.00	508.00	468.50– 551.50	–	–	–	–	–	–	–	–	–	–	–	4	11	3	8	36	18	36	41	11	* 26
Nonmanufacturing	151	39.5	509.50	502.00	467.50– 535.00	–	–	–	–	–	–	–	–	–	–	–	4	10	1	5	36	13	34	26	2	20
Transportation and utilities	28	39.5	555.00	540.50	461.00– 670.00	–	–	–	–	–	–	–	–	–	–	–	1	4	–	–	6	1	1	2	1	12
Stenographers	87	40.0	370.00	389.50	300.00– 419.00	–	–	–	–	2	8	5	16	3	7	2	6	17	10	1	2	2	4	2	–	–
Nonmanufacturing	56	40.0	345.50	305.00	292.00– 404.50	–	–	–	–	2	8	5	16	2	7	2	–	6	–	–	–	2	4	2	–	–
Transportation and utilities	32	39.5	378.50	346.00	300.00– 474.50	–	–	–	–	–	6	–	6	–	6	–	–	6	–	–	–	2	4	2	–	–
Stenographers II	56	40.0	409.00	416.00	393.00– 426.50	–	–	–	–	–	–	3	4	2	1	2	6	17	10	1	2	2	4	2	–	–
Typists	515	39.5	280.00	282.50	234.50– 310.00	–	2	58	83	52	51	82	118	7	29	7	9	1	1	4	–	–	2	2	1	–
Manufacturing	90	40.0	283.50	286.50	239.00– 310.00	–	–	8	7	12	7	14	13	7	2	3	5	1	1	–	–	–	–	–	–	–
Nonmanufacturing	425	39.0	279.50	282.50	234.50– 303.00	–	2	50	66	40	50	68	105	–	27	4	4	–	–	4	–	–	2	2	1	–
Typists I	266	39.5	247.50	237.00	222.00– 270.50	–	2	57	78	33	45	24	26	–	–	–	1	–	–	–	–	–	–	–	–	–
Nonmanufacturing	240	39.5	249.00	240.00	222.00– 270.50	–	2	50	66	27	45	24	26	–	–	–	–	–	–	–	–	–	–	–	–	–
Typists II	249	39.0	314.50	310.00	289.00– 318.00	–	–	1	5	19	12	58	92	7	29	7	8	1	1	4	–	–	2	2	1	–
Manufacturing	64	40.0	302.00	291.00	271.00– 330.00	–	–	1	5	6	7	14	13	7	2	3	4	1	1	–	–	–	–	–	–	–
Nonmanufacturing	185	39.0	319.00	315.00	296.50– 316.00	–	–	–	–	13	5	44	79	–	27	4	4	–	–	4	–	–	2	2	1	–
File clerks	473	39.5	235.00	210.00	196.00– 249.50	14	124	137	57	40	30	7	10	15	7	14	9	4	–	–	–	1	–	4	–	–
Nonmanufacturing	429	39.0	229.00	207.50	193.50– 242.50	12	119	135	54	31	29	5	10	15	–	4	6	4	–	–	–	1	–	4	–	–
File clerks I	232	39.5	205.00	200.50	190.00– 210.00	12	102	74	19	1	23	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	230	39.5	205.00	200.50	190.00– 210.00	12	101	74	19	–	23	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
File clerks II	170	39.0	253.00	214.00	203.00– 247.00	2	22	63	35	8	–	2	3	4	7	13	7	–	–	–	–	1	–	3	–	–
Nonmanufacturing	137	39.0	239.50	213.50	203.00– 234.50	–	18	61	34	5	–	1	3	4	–	3	4	–	–	–	–	1	–	3	–	–
File clerks III	71	39.5	288.50	261.50	248.50– 320.00	–	–	–	3	31	7	5	6	11	–	1	2	4	–	–	–	–	–	1	–	–
Nonmanufacturing	62	39.5	294.00	271.00	249.50– 320.00	–	–	–	1	26	6	4	6	11	–	1	2	4	–	–	–	–	–	1	–	–
Messengers	189	39.5	234.00	228.50	203.50– 254.00	6	9	72	25	44	25	1	3	–	–	2	–	–	–	–	1	1	–	–	–	–
Nonmanufacturing	174	39.5	232.00	227.50	203.50– 254.00	6	8	70	21	39	25	1	2	–	–	–	–	–	–	–	1	1	–	–	–	–

See footnotes at end of tables.

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Table A-1. Weekly earnings of office workers in Denver-Boulder, CO, December 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[3]	Median[3]	Middle range[3]	160 and under 180	180 – 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 500	500 – 520	520 – 560	560 – 600	600 and over
Receptionists	119	40.0	265.00	254.00	231.00– 298.50	–	1	19	22	31	6	12	2	23	1	1	–	1	–	–	–	–	–	–	–	–
Nonmanufacturing	99	39.5	262.00	254.00	230.50– 298.50	–	1	19	21	23	5	6	–	22	1	–	–	1	–	–	–	–	–	–	–	–
Switchboard operators	224	40.0	250.00	231.00	204.50– 274.50	2	36	43	55	19	16	11	12	4	7	11	4	2	1	–	–	–	1	–	–	–
Nonmanufacturing	194	40.0	240.00	227.00	200.00– 248.00	2	36	42	51	19	12	8	7	2	5	7	1	–	1	–	–	–	1	–	–	–
Switchboard operator-receptionists	781	39.5	270.00	256.00	230.00– 294.50	–	12	118	148	145	109	78	60	34	24	17	10	2	4	–	–	–	15	5	–	–
Manufacturing	166	40.0	258.50	256.50	224.50– 270.00	–	–	31	46	11	39	5	24	5	–	–	–	1	4	–	–	–	–	–	–	–
Nonmanufacturing	615	39.5	273.00	256.00	231.00– 294.50	–	12	87	102	134	70	73	36	29	24	17	10	1	–	–	–	–	15	5	–	–
Transportation and utilities	74	39.5	310.00	290.00	254.00– 332.00	–	–	2	4	19	5	15	2	12	–	3	6	–	–	–	–	–	1	5	–	–
Order clerks	411	39.5	312.50	277.00	227.00– 380.00	1	63	16	91	20	34	25	25	17	1	14	9	16	22	–	1	–	14	–	42	–
Manufacturing	150	40.0	277.00	273.50	238.00– 306.00	–	–	–	65	3	11	20	24	16	1	–	6	2	1	–	1	–	–	–	–	–
Nonmanufacturing	261	39.5	333.00	277.00	200.00– 423.50	1	63	16	26	17	23	5	1	1	–	14	3	14	21	–	–	–	14	–	42	–
Order clerks I	247	40.0	234.00	230.00	194.00– 254.50	1	63	16	91	17	30	20	8	1	–	–	–	–	–	–	–	–	–	–	–	–
Manufacturing	94	40.0	250.00	239.00	227.00– 273.50	–	–	–	65	–	7	15	7	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	153	40.0	224.50	215.00	194.00– 244.00	1	63	16	26	17	23	5	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Order clerks II	164	39.5	430.00	415.50	326.50– 575.00	–	–	–	–	3	4	5	17	16	1	14	9	16	22	–	1	–	14	–	42	–
Manufacturing	56	40.0	322.50	307.50	300.00– 327.00	–	–	–	–	3	4	5	17	16	1	–	6	2	1	–	1	–	–	–	–	–
Accounting clerks	3,757	40.0	301.00	292.50	258.00– 337.00	10	33	173	287	491	539	504	453	397	347	197	99	71	31	20	21	13	18	35	18	–
Manufacturing	759	40.0	310.50	300.00	262.50– 355.50	–	–	9	53	78	176	54	93	61	118	26	40	15	3	4	12	8	–	6	3	–
Nonmanufacturing	2,998	40.0	299.00	292.50	250.00– 337.00	10	33	164	234	413	363	450	360	336	229	171	59	56	28	16	9	5	18	29	15	–
Transportation and utilities	577	40.0	334.50	320.00	282.50– 345.50	–	–	39	31	17	47	81	79	137	21	2	33	9	8	2	6	4	18	28	15	–
Accounting clerks I	258	39.5	247.50	242.00	229.50– 270.00	4	13	10	99	22	65	39	6	–	–	–	–	–	–	–	–	–	–	–	–	–
Manufacturing	92	40.0	241.50	236.50	230.50– 254.50	–	–	6	46	19	21	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	166	39.5	251.00	260.00	229.50– 280.00	4	13	4	53	3	44	39	6	–	–	–	–	–	–	–	–	–	–	–	–	–
Accounting clerks II	1,683	40.0	276.00	270.00	240.00– 300.00	6	20	135	130	394	283	280	173	85	87	31	19	27	3	–	5	–	–	5	–	–
Manufacturing	274	40.0	280.00	270.50	260.00– 288.00	–	–	3	4	45	133	37	25	16	–	4	–	1	2	–	4	–	–	–	–	–
Nonmanufacturing	1,409	40.0	275.50	270.00	240.00– 303.00	6	20	132	126	349	150	243	148	69	87	27	19	26	1	–	1	–	–	5	–	–
Transportation and utilities	154	40.0	266.50	259.50	219.00– 284.00	–	–	39	21	17	21	44	4	1	–	–	–	–	1	–	1	–	–	5	–	–
Accounting clerks III	1,333	40.0	316.00	320.00	280.00– 346.00	–	–	27	56	73	161	162	214	248	175	129	46	14	2	11	6	3	2	2	–	–
Manufacturing	251	40.0	336.00	349.00	306.00– 355.50	–	–	–	3	14	21	5	39	28	101	7	16	10	1	2	2	–	–	2	–	–
Nonmanufacturing	1,082	40.0	311.50	308.50	279.00– 337.00	–	–	27	53	59	140	157	175	220	74	122	30	4	1	9	6	3	2	–	–	–
Accounting clerks IV	416	40.0	361.00	346.00	314.50– 395.50	–	–	1	2	2	30	19	56	63	77	37	31	30	26	8	4	3	13	11	3	–
Manufacturing	110	40.0	362.50	352.00	310.00– 388.00	–	–	–	–	–	1	8	25	16	9	15	21	4	–	1	2	1	–	4	3	–
Nonmanufacturing	306	39.5	360.50	346.00	321.00– 413.50	–	–	1	2	2	29	11	31	47	68	22	10	26	26	7	2	2	13	7	–	–
Transportation and utilities	77	40.0	403.00	366.00	351.00– 493.50	–	–	–	–	–	–	3	4	10	21	1	4	6	6	1	1	1	13	6	–	–
Payroll clerks	308	39.5	321.50	311.50	273.50– 346.00	–	–	3	12	25	46	41	59	25	33	13	17	4	6	11	1	1	4	7	–	–
Manufacturing	103	40.0	318.00	312.00	260.00– 344.50	–	–	–	9	12	14	–	28	10	12	–	1	2	4	10	1	–	–	–	–	–
Nonmanufacturing	205	39.5	327.00	311.50	280.00– 346.00	–	–	3	3	13	32	41	31	15	21	13	15	2	2	1	–	1	4	7	–	–
Transportation and utilities	50	40.0	366.50	337.00	288.50– 425.00	–	–	–	–	6	–	12	5	2	5	1	4	1	2	1	–	–	4	7	–	–
Key entry operators	1,081	40.0	297.50	282.00	247.50– 328.00	14	59	84	42	200	135	173	79	66	25	25	45	46	11	3	2	53	–	1	18	–
Manufacturing	237	40.0	318.00	312.00	257.50– 377.50	–	5	4	14	47	17	15	24	21	15	19	20	26	5	1	–	4	–	–	–	–
Nonmanufacturing	844	40.0	292.00	273.50	241.00– 313.00	14	54	80	28	153	118	158	55	45	10	6	25	20	6	2	2	49	–	1	18	–
Transportation and utilities	154	40.0	367.00	337.00	290.00– 409.00	–	3	–	–	9	26	14	8	20	4	1	15	19	5	2	2	7	–	1	18	–

See footnotes at end of tables.

Table A-1. Weekly earnings of office workers in Denver-Boulder, CO, December 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																		
			Mean[2]	Median[2]	Middle range[2]	160 and under 180	180 – 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 500	500 – 520	520 – 560	560 – 600	600 and over
Key entry operators I	533	40.0	263.00	256.00	212.50– 294.50	14	58	82	21	107	62	96	34	23	8	-	4	19	1	-	-	4	-	-	-	-
Manufacturing	93	40.0	269.50	256.00	241.00– 298.00	-	5	4	10	42	6	3	14	2	3	-	-	-	-	-	-	4	-	-	-	-
Nonmanufacturing	440	40.0	261.50	257.00	208.50– 294.50	14	53	78	11	65	56	93	20	21	5	-	4	19	1	-	-	-	-	-	-	-
Transportation and utilities	86	40.0	323.00	323.50	269.00– 391.50	-	3	-	-	7	22	7	4	18	1	-	4	19	1	-	-	-	-	-	-	-
Key entry operators II	548	40.0	331.50	301.50	260.00– 387.00	-	1	2	21	93	73	77	45	43	17	25	41	27	10	3	2	49	-	1	18	-
Manufacturing	144	40.0	349.00	354.00	304.00– 398.50	-	-	-	4	5	11	12	10	19	12	19	20	26	5	1	-	-	-	-	-	-
Nonmanufacturing	404	40.0	325.00	285.00	256.00– 374.00	-	1	2	17	88	62	65	35	24	5	6	21	1	5	2	2	49	-	1	18	-
Transportation and utilities	68	40.0	422.50	410.50	312.50– 564.50	-	-	-	-	2	4	7	4	2	3	1	11	-	4	2	2	7	-	1	18	-

[1] Workers were distributed as follows: 14 at $600.00 to $640.00; 4 at $640.00 to $680.00; 4 at $680.00 to $720.00; and 4 at $720.00 to $760.00.

Also see footnotes at end of tables.

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Table A-2. Weekly earnings of professional and technical workers in Denver-Boulder, CO, December 1985

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[2]	Middle range[2]	Under 220	220 and under 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 360	360 – 400	400 – 440	440 – 480	480 – 520	520 – 560	560 – 600	600 – 640	640 – 680	680 – 720	720 – 760	760 – 800	800 – 840	840 – 880	880 and over
Computer systems analysts (business)	1,434	40.0	624.50	625.50	548.00- 695.00	-	-	-	-	-	4	7	26	64	83	96	151	169	166	197	187	83	81	42	38	30
Manufacturing	555	40.0	626.00	630.00	547.00- 706.50	-	-	-	-	-	4	5	4	18	24	54	56	55	72	89	62	42	35	17	11	7
Nonmanufacturing	869	39.5	623.50	622.50	548.00- 695.00	-	-	-	-	-	-	2	22	46	59	42	95	114	94	108	125	41	46	25	27	23
Transportation and utilities	380	40.0	635.50	643.50	586.50- 695.00	-	-	-	-	-	-	2	10	12	21	13	28	52	48	45	68	26	35	3	11	6
Computer systems analysts (business) I	305	39.5	498.00	500.00	427.00- 558.50	-	-	-	-	-	4	7	24	62	41	47	44	33	24	14	2	3	-	-	-	-
Manufacturing	134	40.0	509.00	509.00	462.50- 557.00	-	-	-	-	-	4	5	2	16	12	35	29	14	13	4	-	-	-	-	-	-
Nonmanufacturing	171	39.5	491.50	449.50	426.50- 570.00	-	-	-	-	-	-	2	22	46	29	12	15	19	11	10	2	3	-	-	-	-
Transportation and utilities	61	39.0	456.50	441.50	412.00- 511.50	-	-	-	-	-	-	2	10	12	17	6	2	6	4	2	-	-	-	-	-	-
Computer systems analysts (business) II	691	40.0	617.00	617.50	556.00- 680.00	-	-	-	-	-	-	-	2	2	42	49	101	117	90	102	110	38	27	8	2	1
Manufacturing	231	40.0	626.00	635.00	558.00- 691.50	-	-	-	-	-	-	-	2	2	12	19	23	30	36	43	29	15	11	6	2	1
Nonmanufacturing	460	40.0	611.50	604.00	556.00- 680.00	-	-	-	-	-	-	-	-	-	30	30	78	87	54	59	81	23	16	2	-	-
Transportation and utilities	240	40.0	637.50	645.00	576.50- 695.00	-	-	-	-	-	-	-	-	-	4	7	24	46	35	40	59	14	10	1	-	-
Computer systems analysts (business) III	428	39.5	726.50	707.50	661.00- 793.00	-	-	-	-	-	-	-	-	-	-	-	6	19	52	81	75	42	54	34	36	29
Manufacturing	130	40.0	706.50	700.00	647.50- 763.00	-	-	-	-	-	-	-	-	-	-	-	4	11	23	42	33	27	24	11	9	6
Nonmanufacturing	238	39.5	742.50	715.00	667.50- 817.00	-	-	-	-	-	-	-	-	-	-	-	2	8	29	39	42	15	30	23	27	23
Transportation and utilities	79	40.0	759.50	764.50	694.00- 795.00	-	-	-	-	-	-	-	-	-	-	-	2	-	9	3	9	12	25	2	11	6
Computer programmers (business)	1,147	39.0	548.50	535.00	461.00- 639.00	-	-	-	-	1	6	24	98	90	148	155	109	107	182	73	62	47	27	12	8	-
Nonmanufacturing	690	39.0	537.00	519.50	454.50- 630.50	-	-	-	-	1	1	19	82	78	133	135	90	68	156	42	34	31	12	6	8	-
Computer programmers (business) I	182	39.5	426.00	422.50	381.00- 464.50	-	-	-	-	1	6	20	52	27	40	25	5	1	4	1	-	-	-	-	-	-
Nonmanufacturing	156	39.0	423.00	420.50	381.50- 460.50	-	-	-	-	1	1	19	47	26	40	16	2	-	3	1	-	-	-	-	-	-
Computer programmers (business) II	497	39.5	513.50	508.00	453.00- 576.00	-	-	-	-	-	-	4	43	53	66	109	78	75	40	20	7	2	-	-	-	-
Manufacturing	117	40.0	527.50	556.00	446.50- 595.00	-	-	-	-	-	-	4	11	11	13	10	10	32	18	4	4	-	-	-	-	-
Nonmanufacturing	380	39.0	509.00	502.00	453.00- 554.00	-	-	-	-	-	-	-	32	42	53	99	68	43	22	16	3	2	-	-	-	-
Transportation and utilities	92	39.0	488.50	498.50	399.00- 542.50	-	-	-	-	-	-	-	32	1	7	14	21	10	5	2	-	-	-	-	-	-
Computer programmers (business) III	468	39.0	633.00	639.00	577.00- 694.00	-	-	-	-	-	-	-	3	10	40	21	26	31	138	52	55	45	27	12	8	-
Nonmanufacturing	360	39.0	616.50	639.00	556.00- 674.00	-	-	-	-	-	-	-	3	10	40	20	20	25	131	25	31	29	12	6	8	-
Computer operators	1,150	40.0	410.00	391.50	326.50- 502.00	15	7	35	52	59	91	211	139	112	119	123	44	36	102	5	-	-	-	-	-	-
Manufacturing	318	40.0	423.50	387.00	335.00- 450.00	-	2	4	16	8	26	62	71	37	47	16	23	5	1	-	-	-	-	-	-	-
Nonmanufacturing	832	39.5	416.50	398.50	325.00- 511.00	15	5	31	36	51	65	149	68	75	72	107	21	31	101	5	-	-	-	-	-	-
Computer operators I	148	40.0	290.50	274.50	254.00- 319.00	15	7	28	36	18	7	8	17	11	1	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	52	40.0	340.00	362.00	274.50- 387.00	-	2	4	10	5	1	3	17	9	1	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	96	39.5	264.00	260.00	254.00- 291.00	15	5	24	26	13	6	5	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Computer operators II	607	40.0	386.00	362.00	326.00- 451.50	-	-	7	16	41	72	153	107	42	58	96	13	1	1	-	-	-	-	-	-	-
Manufacturing	194	40.0	379.00	360.00	328.00- 420.00	-	-	-	6	3	25	58	48	11	30	1	12	-	-	-	-	-	-	-	-	-
Nonmanufacturing	413	40.0	389.00	362.00	320.00- 476.50	-	-	7	10	38	47	95	59	31	28	95	1	1	1	-	-	-	-	-	-	-
Computer operators III	395	39.5	491.50	486.00	405.50- 603.50	-	-	-	-	-	12	50	15	59	60	27	31	35	101	5	-	-	-	-	-	-
Manufacturing	72	40.0	472.50	470.00	431.50- 518.00	-	-	-	-	-	-	1	6	17	16	15	11	5	1	-	-	-	-	-	-	-
Nonmanufacturing	323	39.5	496.00	496.00	405.50- 603.50	-	-	-	-	-	12	49	9	42	44	12	20	30	100	5	-	-	-	-	-	-
Drafters	632	40.0	403.00	398.50	340.00- 456.50	-	6	21	43	18	26	64	141	90	106	56	41	13	6	1	-	-	-	-	-	-
Manufacturing	410	40.0	397.50	381.00	335.00- 455.00	-	1	11	38	3	11	64	104	42	60	32	31	9	4	-	-	-	-	-	-	-
Nonmanufacturing	222	40.0	413.00	428.00	370.00- 460.00	-	5	10	5	15	15	-	37	48	46	24	10	4	2	1	-	-	-	-	-	-

See footnotes at end of tables.

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Table A-2. Weekly earnings of professional and technical workers in Denver-Boulder, CO, December 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	Under 220	220 and under 240	240 - 260	260 - 280	280 - 300	300 - 320	320 - 360	360 - 400	400 - 440	440 - 480	480 - 520	520 - 560	560 - 600	600 - 640	640 - 680	680 - 720	720 - 760	760 - 800	800 - 840	840 - 880	880 and over
Drafters II	158	40.0	319.50	328.50	280.00- 360.00	-	5	10	20	16	16	43	48	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	111	40.0	336.00	335.00	320.00- 360.00	-	-	-	15	1	6	43	46	-	-	-	-	-	-	-	-	-	-	-	-	-
Drafters III	162	40.0	395.00	395.50	363.50- 420.00	-	-	-	-	1	9	17	68	39	23	4	1	-	-	-	-	-	-	-	-	-
Manufacturing	117	40.0	393.50	388.00	363.50- 420.00	-	-	-	-	1	4	17	48	24	18	4	1	-	-	-	-	-	-	-	-	-
Drafters IV	172	40.0	461.00	445.00	427.50- 509.00	-	-	-	-	-	-	2	23	40	50	34	15	4	4	-	-	-	-	-	-	-
Manufacturing	91	40.0	464.50	460.00	440.00- 496.00	-	-	-	-	-	-	2	8	12	37	21	6	1	4	-	-	-	-	-	-	-
Nonmanufacturing	81	40.0	457.00	437.50	420.00- 510.00	-	-	-	-	-	-	-	15	28	13	13	9	3	-	-	-	-	-	-	-	-
Drafters V	100	40.0	502.00	480.00	452.50- 550.00	-	-	-	-	-	-	-	1	11	33	18	25	9	2	1	-	-	-	-	-	-
Manufacturing	51	40.0	522.50	550.00	480.00- 558.00	-	-	-	-	-	-	-	1	6	5	7	24	8	-	-	-	-	-	-	-	-
Electronics technicians	1,464	40.0	499.00	549.00	386.00- 582.50	-	-	7	45	66	41	81	161	99	65	89	111	510	86	43	33	25	2	-	-	-
Manufacturing	623	40.0	439.00	419.00	366.00- 513.50	-	-	1	6	21	41	78	122	90	55	67	40	62	14	17	7	1	1	-	-	-
Nonmanufacturing	841	40.0	543.00	582.50	537.50- 582.50	-	-	6	39	45	-	3	39	9	10	22	71	448	72	26	26	24	1	-	-	-
Electronics technicians I	209	40.0	327.50	320.00	285.50- 354.50	-	-	6	25	39	36	53	28	9	11	2	-	-	-	-	-	-	-	-	-	-
Manufacturing	153	40.0	346.00	337.00	311.50- 372.00	-	-	-	4	12	36	53	28	9	11	-	-	-	-	-	-	-	-	-	-	-
Electronics technicians II	896	40.0	506.50	582.50	405.00- 582.50	-	-	1	20	27	5	28	132	76	22	35	70	431	44	5	-	-	-	-	-	-
Manufacturing	239	40.0	399.00	391.00	369.00- 420.00	-	-	1	2	9	5	25	93	67	12	18	5	2	-	-	-	-	-	-	-	-
Electronics technicians III	354	39.5	579.50	585.00	513.50- 643.00	-	-	-	-	-	-	-	1	14	32	52	41	79	40	36	33	25	1	-	-	-
Manufacturing	226	40.0	540.00	536.50	486.50- 585.00	-	-	-	-	-	-	-	1	14	32	49	35	60	12	15	7	1	-	-	-	-
Nonmanufacturing	128	39.0	648.50	643.00	605.00- 689.00	-	-	-	-	-	-	-	-	-	-	3	6	19	28	21	26	24	1	-	-	-
Transportation and utilities	123	39.0	650.00	646.00	601.50- 707.50	-	-	-	-	-	-	-	-	-	-	3	6	19	23	21	26	24	1	-	-	-
Registered industrial nurses	65	40.0	506.00	483.50	460.50- 556.50	-	-	-	-	-	-	-	5	5	20	13	7	4	5	6	-	-	-	-	-	-

[3] Workers were distributed as follows: 5 at $160.00 to $180.00; 5 at $180.00 to $200.00; and 5 at $200.00 to $220.00.

Also see footnotes at end of tables.

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Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Denver-Boulder, CO, December 1985

Sex,[1] occupation, and industry division	Number of workers	Average (mean[2])	
		Weekly hours[3] (standard)	Weekly earnings (in dollars)[4]
Office occupations - men			
Messengers	119	39.5	228.50
Nonmanufacturing	112	39.5	228.00
Accounting clerks			
Nonmanufacturing			
Transportation and utilities	42	40.0	396.00
Office occupations - women			
Secretaries	3,181	39.5	382.50
Manufacturing	1,366	40.0	386.00
Nonmanufacturing	1,815	39.0	380.50
Transportation and utilities	431	40.0	408.50
Secretaries I			
Manufacturing	59	40.0	314.50
Secretaries II	809	39.5	339.50
Manufacturing	385	40.0	343.00
Nonmanufacturing	444	39.0	336.50
Transportation and utilities	151	40.0	371.00
Secretaries III	1,113	39.5	375.00
Manufacturing	584	40.0	383.00
Nonmanufacturing	529	39.5	366.50
Transportation and utilities	95	40.0	387.50
Secretaries IV	754	39.5	426.50
Manufacturing	276	40.0	455.50
Nonmanufacturing	478	39.5	409.50
Transportation and utilities	119	40.0	431.50
Secretaries V	190	39.5	517.50
Nonmanufacturing	147	39.5	510.50
Transportation and utilities	26	39.5	557.50
Stenographers	87	40.0	370.00
Nonmanufacturing	58	40.0	345.50
Transportation and utilities	32	39.5	378.50
Stenographers II	58	40.0	409.00
Typists	498	39.5	282.00
Manufacturing	85	40.0	287.00
Nonmanufacturing	413	39.0	281.00
Typists I	249	39.5	250.00
Nonmanufacturing	226	39.5	250.50
Typists II	249	39.0	314.50
Manufacturing	64	40.0	302.00
Nonmanufacturing	185	39.0	319.00
File clerks	434	39.0	232.50
Nonmanufacturing	390	39.0	225.50
File clerks I	229	39.5	205.50
Nonmanufacturing	227	39.5	205.50
File clerks II	143	39.0	251.00
Nonmanufacturing	110	38.5	234.00
File clerks III	62	39.5	288.50
Nonmanufacturing	53	39.5	294.50
Messengers	68	39.5	241.50
Nonmanufacturing	60	39.5	238.00
Receptionists	115	40.0	265.00
Nonmanufacturing	95	39.5	262.00
Switchboard operators	214	40.0	247.00
Nonmanufacturing	184	40.0	236.00
Switchboard operator-receptionists	781	39.5	270.00
Manufacturing	166	40.0	258.50
Nonmanufacturing	615	39.5	273.00
Transportation and utilities	74	39.5	310.00
Order clerks	323	40.0	259.00
Manufacturing	147	40.0	275.00
Nonmanufacturing	176	40.0	246.00
Order clerks I	247	40.0	234.00
Manufacturing	94	40.0	250.00
Nonmanufacturing	153	40.0	224.50
Order clerks II	76	39.5	340.50
Manufacturing	53	40.0	319.00
Accounting clerks	3,399	40.0	299.30
Manufacturing	697	40.0	309.50
Nonmanufacturing	2,702	40.0	296.00
Transportation and utilities	535	40.0	329.50
Accounting clerks I	250	39.5	247.50
Manufacturing	92	40.0	241.50
Nonmanufacturing	158	39.5	251.50
Accounting clerks II	1,555	40.0	273.00
Manufacturing	252	40.0	280.50
Nonmanufacturing	1,303	39.5	271.50
Accounting clerks III	1,183	40.0	316.50
Manufacturing	219	40.0	337.00
Nonmanufacturing	964	40.0	312.00
Accounting clerks IV	345	39.5	359.00
Manufacturing	103	40.0	360.00
Nonmanufacturing	242	39.5	358.50
Transportation and utilities	65	40.0	385.50
Payroll clerks	300	39.5	320.00
Manufacturing	103	40.0	318.00
Nonmanufacturing	197	39.5	321.00
Transportation and utilities	48	40.0	362.50
Key entry operators	923	40.0	302.50
Manufacturing	233	40.0	319.00
Nonmanufacturing	690	40.0	297.00
Transportation and utilities	143	40.0	366.50
Key entry operators I	457	40.0	261.00
Manufacturing	89	40.0	271.00
Nonmanufacturing	368	40.0	259.00
Transportation and utilities	75	40.0	320.00
Key entry operators II	466	40.0	343.50
Manufacturing	144	40.0	349.00
Nonmanufacturing			
Transportation and utilities	68	40.0	422.50
Professional and technical occupations - men			
Computer systems analysts (business)	869	40.0	651.00
Manufacturing	358	40.0	652.00
Nonmanufacturing	511	40.0	650.50
Transportation and utilities	227	40.0	649.50
Computer systems analysts (business) I	156	39.5	518.00
Manufacturing	78	40.0	521.00
Nonmanufacturing	78	39.5	514.50
Transportation and utilities	29	39.5	468.50
Computer systems analysts (business) II	421	40.0	635.00
Manufacturing	147	40.0	654.50
Nonmanufacturing	274	40.0	625.00
Transportation and utilities	141	40.0	641.50
Computer systems analysts (business) III	292	40.0	745.00
Manufacturing	133	40.0	725.50
Nonmanufacturing	159	39.5	761.50
Transportation and utilities	57	40.0	761.00
Computer programmers (business)			
Computer programmers (business) II			
Manufacturing	71	40.0	554.00
Computer operators	542	39.5	396.00
Manufacturing	145	40.0	390.00
Nonmanufacturing	397	39.5	398.00
Transportation and utilities	93	40.0	518.50
Computer operators I	70	39.5	286.00
Nonmanufacturing	51	39.5	274.50
Computer operators II	293	40.0	367.50
Manufacturing	92	40.0	374.00
Nonmanufacturing	201	39.5	364.50
Transportation and utilities	37	39.5	463.00
Computer operators III	179	39.5	485.00
Nonmanufacturing	145	39.5	488.00
Drafters	431	40.0	426.00
Manufacturing	275	40.0	422.50
Nonmanufacturing	156	40.0	431.50
Drafters II	77	40.0	319.50

See footnotes at end of tables.

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Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Denver-Boulder, CO, December 1985 —Continued

Sex,[1] occupation, and industry division	Number of workers	Average (mean[2])	
		Weekly hours[3] (standard)	Weekly earnings (in dollars)[4]
Drafters III	120	40.0	403.50
Manufacturing	94	40.0	400.00
Drafters IV	126	40.0	471.50
Manufacturing	72	40.0	472.00
Nonmanufacturing	54	40.0	471.50
Drafters V	94	40.0	502.50
Electronics technicians	1,083	40.0	505.50
Nonmanufacturing	680	40.0	528.00
Transportation and utilities	610	40.0	550.00
Electronics technicians II	684	40.0	510.50
Electronics technicians III:			
Manufacturing	191	40.0	551.00
Professional and technical occupations – women			
Computer systems analysts (business)	505	39.5	582.00
Manufacturing	166	40.0	574.00
Nonmanufacturing	339	39.5	586.00
Transportation and utilities	146	39.5	616.50
Computer systems analysts (business) I	147	39.5	477.50
Manufacturing	56	40.0	492.50
Nonmanufacturing	91	39.0	468.50
Transportation and utilities	32	39.0	465.00
Computer systems analysts (business) II	243	39.5	592.50
Manufacturing	72	40.0	589.00
Nonmanufacturing	171	39.5	594.00
Computer systems analysts (business) III	115	39.5	692.50
Nonmanufacturing	77	39.0	706.50
Computer programmers (business)			
Computer programmers (business) I	134	39.0	422.00
Nonmanufacturing	121	39.0	414.00
Computer operators	573	40.0	425.00
Manufacturing	148	40.0	402.00
Nonmanufacturing	425	40.0	433.00
Computer operators I	72	40.0	298.00
Computer operators II	295	40.0	403.50
Manufacturing	93	40.0	396.00
Nonmanufacturing	202	40.0	412.00
Computer operators III	206	40.0	500.00
Nonmanufacturing	178	40.0	502.50
Drafters	185	40.0	355.50
Manufacturing	121	40.0	349.00
Nonmanufacturing	64	40.0	367.50
Drafters II	77	40.0	321.00
Manufacturing	57	40.0	333.50
Registered industrial nurses	62	40.0	504.50

See footnotes at end of tables.

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Table A-4. Hourly earnings of maintenance, toolroom, and powerplant workers in Denver-Boulder, CO, December 1985

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																				
		Mean[2]	Median[2]	Middle range[3]	Under 6.00	6.00 and under 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 13.50	13.50 – 14.00	14.00 – 14.50	14.50 – 15.00	15.00 – 16.00	16.00 – 17.00	17.00 – 18.00	18.00 – 19.00
Maintenance carpenters	93	12.41	12.82	12.03–13.27	-	-	-	-	-	-	-	3	6	4	4	-	-	23	8	36	8	-	-	-	1	-	-
Maintenance electricians	420	14.01	14.08	13.53–15.40	-	-	-	-	-	5	-	-	10	1	10	20	11	8	33	2	102	33	28	95	62	-	-
Manufacturing	334	13.73	13.54	12.82–15.40	-	-	-	-	-	-	-	-	6	-	10	20	11	8	33	2	101	33	14	95	1	-	-
Maintenance painters	84	11.53	12.73	11.83–12.73	-	-	2	9	-	7	-	-	2	-	-	-	1	7	45	11	-	-	-	-	-	-	-
Maintenance machinists	215	13.50	13.27	12.82–14.36	-	-	-	-	-	-	-	-	-	6	4	18	-	-	37	84	4	9	6	26	21	-	-
Manufacturing	194	13.23	13.27	12.82–13.27	-	-	-	-	-	-	-	-	-	6	4	18	-	-	37	84	4	9	6	26	-	-	-
Maintenance mechanics (machinery)	949	12.60	12.20	10.44–15.40	-	-	-	-	-	87	-	22	55	84	182	26	14	8	31	79	6	4	33	186	134	18	-
Manufacturing	716	11.87	10.99	10.10–14.78	-	-	-	-	-	87	-	22	55	79	134	26	14	8	31	79	-	-	15	166	-	-	-
Nonmanufacturing	233	14.87	16.06	13.60–16.06	-	-	-	-	-	-	-	-	-	5	48	-	-	-	-	-	6	4	18	-	134	18	-
Motor vehicle mechanics	2,090	12.52	11.97	11.72–13.18	-	-	-	-	-	38	2	14	3	25	117	23	990	208	132	90	113	12	153	66	26	38	42
Manufacturing	134	11.95	12.40	10.99–12.65	-	-	-	-	-	6	2	-	3	8	25	8	6	22	30	12	-	1	5	6	-	-	-
Nonmanufacturing	1,956	12.56	11.97	11.72–13.22	-	-	-	-	-	30	-	14	-	17	92	15	984	186	102	78	113	11	148	60	26	38	42
Transportation and utilities	663	13.83	13.65	12.25–14.75	-	-	-	-	-	21	-	-	-	-	46	6	58	72	36	26	113	-	148	31	26	38	42
Maintenance workers (general)	797	8.83	7.62	6.50–11.56	* 184	15	85	84	69	21	41	19	29	10	5	22	19	29	62	7	15	3	59	19	-	-	-
Manufacturing	168	10.55	11.56	7.73–13.77	23	2	2	11	28	1	7	9	-	-	-	-	14	-	15	5	14	1	17	19	-	-	-
Nonmanufacturing	629	8.37	7.14	5.89–10.39	161	13	83	73	41	20	34	10	29	10	5	22	5	29	47	2	1	2	42	-	-	-	-
Transportation and utilities	31	8.82	7.88	7.58– 9.80	-	2	2	-	12	2	-	-	6	-	3	-	4	-	-	-	-	-	-	-	-	-	-
Maintenance trades helpers	97	8.43	7.74	7.00–10.63	-	-	6	34	10	19	1	-	-	-	19	-	8	-	-	-	-	-	-	-	-	-	-
Machine-tool operators (toolroom)	88	12.90	13.54	11.89–13.65	-	-	-	-	-	-	-	4	1	7	1	1	17	-	1	-	39	3	14	-	-	-	-
Manufacturing	88	12.90	13.54	11.89–13.65	-	-	-	-	-	-	-	4	1	7	1	1	17	-	1	-	39	3	14	-	-	-	-
Tool and die makers	187	13.93	14.35	12.93–14.50	-	-	-	-	-	-	-	-	-	-	-	32	4	5	9	4	2	83	8	28	11	1	-
Manufacturing	187	13.93	14.35	12.93–14.50	-	-	-	-	-	-	-	-	-	-	-	32	4	5	9	4	2	83	8	28	11	1	-
Stationary engineers	325	13.88	13.91	13.27–14.81	-	-	-	-	-	-	-	2	-	1	2	6	16	18	6	98	22	3	103	42	2	4	-
Manufacturing	174	13.58	13.27	13.27–13.81	-	-	-	-	-	-	-	-	-	1	1	2	8	16	4	92	7	1	-	42	-	-	-
Nonmanufacturing	151	14.22	14.56	13.91–14.81	-	-	-	-	-	-	-	2	-	-	1	4	8	2	2	6	15	2	103	-	2	4	-

* Workers were distributed as follows: 4 under $4.50; 4 at $4.50 to $5.00; 126 at $5.00 to $5.50; and 50 at $5.50 to $6.00.

Also see footnotes at end of tables.

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Table A-5. Hourly earnings of material movement and custodial workers in Denver-Boulder, CO, December 1985

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																					
		Mean[2]	Median[2]	Middle range[3]	3.35 and under 3.50	3.50 – 4.00	4.00 – 4.50	4.50 – 5.00	5.00 – 5.50	5.50 – 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 14.00	14.00 – 15.00	15.00 – 16.00
Truckdrivers	5,503	10.27	10.29	7.90–12.94	–	–	139	39	34	327	42	586	114	497	73	84	316	344	221	105	146	186	676	383	692	477	22
Manufacturing	917	11.06	11.60	9.98–12.00	–	–	–	–	3	5	4	6	29	18	47	35	26	63	33	17	140	41	374	8	10	58	–
Nonmanufacturing	4,586	10.11	9.62	6.95–12.94	–	–	139	39	31	322	38	580	85	479	26	49	290	281	188	88	6	145	302	375	682	419	22
Transportation and utilities	1,572	12.30	13.51	9.62–14.64	–	–	–	–	–	–	–	–	–	8	4	28	280	280	–	–	–	10	1	2	518	419	22
Truckdrivers, light truck	853	5.97	5.90	4.75– 5.90	–	–	139	39	34	285	2	17	32	49	23	5	4	–	15	–	–	9	–	–	–	–	–
Nonmanufacturing	616	5.84	5.90	4.50– 5.90	–	–	139	39	31	280	–	14	28	44	22	4	–	–	15	–	–	–	–	–	–	–	–
Truckdrivers, medium truck	2,030	10.70	10.29	6.90–13.70	–	–	–	–	–	42	19	567	29	13	45	35	11	150	170	–	2	52	4	22	484	385	–
Manufacturing	102	9.15	8.48	8.48– 9.08	–	–	–	–	–	–	2	1	–	7	45	18	6	1	–	–	–	18	4	–	–	–	–
Nonmanufacturing	1,928	10.78	10.29	6.90–13.70	–	–	–	–	–	42	17	566	29	6	–	17	5	149	170	–	2	34	–	22	484	385	–
Transportation and utilities	1,021	13.42	13.70	13.51–14.64	–	–	–	–	–	–	–	–	–	–	–	–	–	148	–	–	–	4	–	–	484	385	–
Truckdrivers, heavy truck	638	10.89	12.00	9.86–12.00	–	–	–	–	–	–	21	2	1	1	5	44	50	68	28	–	48	38	332	–	–	–	–
Manufacturing	496	11.40	12.00	11.00–12.00	–	–	–	–	–	–	–	2	1	1	1	16	14	44	28	–	48	9	332	–	–	–	–
Truckdrivers, tractor-trailer	1,917	11.09	12.00	7.90–12.94	–	–	–	–	–	–	–	–	52	434	–	–	51	126	8	105	64	87	338	360	180	92	22
Manufacturing	245	11.53	11.30	10.75–13.90	–	–	–	–	–	–	–	–	24	5	–	–	2	18	5	17	60	5	34	7	10	58	–
Nonmanufacturing	1,672	11.02	12.26	7.90–12.94	–	–	–	–	–	–	–	–	28	429	–	–	49	108	3	88	4	82	302	353	170	34	22
Transportation and utilities	249	11.33	9.62	9.62–13.75	–	–	–	–	–	–	–	–	–	4	–	–	44	108	–	–	–	–	1	2	34	34	22
Shippers	201	9.30	8.59	7.21–10.53	–	–	–	–	–	8	25	9	14	–	3	52	21	14	–	5	–	4	4	–	42	–	–
Manufacturing	106	8.37	8.59	6.88– 8.85	–	–	–	–	–	8	11	9	–	–	3	52	–	14	–	5	–	4	–	–	–	–	–
Receivers	181	7.99	7.69	6.75– 8.82	–	–	–	–	28	–	–	62	–	11	29	12	1	2	11	1	2	4	4	–	14	–	–
Manufacturing	106	8.23	8.05	6.88– 8.82	–	–	–	–	–	–	–	36	–	11	27	12	1	1	11	1	2	4	–	–	–	–	–
Nonmanufacturing	75	7.66	6.75	5.00– 9.55	–	–	–	–	28	–	–	26	–	–	2	–	–	1	–	–	–	–	4	–	14	–	–
Shippers and receivers	316	8.63	8.70	6.25–11.57	–	–	2	1	25	32	30	37	8	5	17	46	24	–	2	–	4	15	68	2	–	–	–
Manufacturing	62	8.66	8.99	6.05–12.00	–	–	2	–	4	4	9	2	–	2	7	12	1	–	2	–	–	–	17	–	–	–	–
Nonmanufacturing	254	8.62	8.70	6.25–11.57	–	–	–	1	21	28	21	35	8	3	10	34	23	–	–	–	4	15	51	2	–	–	–
Warehousemen	2,840	10.69	11.77	9.00–12.45	17	17	17	41	32	101	120	100	40	38	8	39	205	120	91	62	144	553	312	26	484	25	70
Manufacturing	507	9.01	7.78	6.00–11.38	–	–	–	7	15	73	64	52	32	19	5	5	1	6	3	39	72	3	20	1	88	2	–
Nonmanufacturing	2,133	11.09	11.77	9.62–12.45	17	17	17	34	17	28	58	48	8	17	3	34	204	114	88	23	72	550	292	25	378	23	70
Transportation and utilities	742	11.79	11.90	9.33–13.70	–	–	–	–	–	–	6	–	6	–	1	–	174	96	7	22	4	68	15	2	268	3	70
Order fillers	1,175	10.22	11.30	9.71–12.45	–	28	56	–	60	28	4	44	–	37	8	5	5	81	180	22	100	–	467	50	–	–	–
Manufacturing	366	9.50	10.12	8.27–11.30	–	–	–	–	32	–	4	16	–	37	8	–	–	81	70	18	100	–	–	–	–	–	–
Nonmanufacturing	809	10.55	12.45	10.26–12.45	–	28	56	–	28	28	–	28	–	–	–	5	5	–	110	4	–	–	467	50	–	–	–
Material handling laborers	1,278	9.44	8.17	7.00–12.92	–	–	8	17	47	82	45	41	210	38	205	43	15	–	–	1	51	9	129	110	227	–	–
Manufacturing	393	7.32	7.05	5.89– 8.17	–	–	–	7	45	74	22	40	44	3	115	3	–	–	–	–	19	–	21	–	–	–	–
Nonmanufacturing	885	10.38	12.10	7.50–13.05	–	–	8	10	2	8	23	1	166	35	90	40	15	–	–	1	32	9	108	110	227	–	–
Transportation and utilities	432	11.20	13.05	8.00–13.05	–	–	–	–	–	–	–	–	4	24	90	40	15	–	–	1	12	9	6	4	227	–	–
Forklift operators	1,111	11.45	13.05	10.53–13.05	–	–	–	–	5	30	21	140	16	16	9	15	12	9	3	2	15	51	114	26	627	–	–
Manufacturing	310	11.12	11.86	8.76–13.40	–	–	–	–	5	2	21	–	16	16	9	14	10	9	3	2	15	50	4	–	134	–	–
Nonmanufacturing	801	11.57	13.05	12.49–13.05	–	–	–	–	–	28	–	140	–	–	1	2	–	–	–	–	1	110	26	493	–	–	–
Guards	4,518	5.29	4.25	3.75– 6.25	366	1139	831	220	295	326	409	144	145	242	65	26	17	59	–	14	4	187	–	–	12	–	–
Manufacturing	408	9.58	10.18	8.00–11.75	–	–	–	6	7	31	22	13	10	13	55	15	10	6	17	14	4	185	–	–	–	–	–
Nonmanufacturing	4,110	4.87	4.10	3.75– 5.66	366	1139	831	214	268	295	387	131	135	229	10	11	7	53	–	–	–	2	–	–	12	–	–
Guards I	2,962	4.29	3.90	3.60– 4.25	366	1139	811	190	170	67	25	43	12	14	47	16	9	35	1	3	–	14	–	–	–	–	–
Manufacturing	139	7.61	8.06	5.80– 8.06	–	–	–	6	7	26	9	4	5	11	46	5	2	2	1	3	–	12	–	–	–	–	–
Nonmanufacturing	2,823	4.13	3.90	3.60– 4.10	366	1139	811	184	163	41	16	39	7	3	1	11	7	33	–	–	–	2	–	–	–	–	–
Guards II	1,556	7.20	6.44	5.88– 7.53	–	–	20	30	125	259	384	101	133	228	18	10	8	24	16	11	4	173	–	–	12	–	–

See footnotes at end of tables.

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Table A-5. Hourly earnings of material movement and custodial workers in Denver-Boulder, CO, December 1985 —Continued

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																			
		Mean[2]	Median[2]	Middle range[3]	3.35 and under 3.50	3.50 – 4.00	4.00 – 4.50	4.50 – 5.00	5.00 – 5.50	5.50 – 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 14.00	14.00 – 15.00	15.00 – 16.00
Janitors, porters, and cleaners	6,433	5.08	4.35	4.25– 5.25	449	423	3126	219	1254	79	25	19	159	18	16	124	105	71	64	93	58	8	97	14	10	-	-
Manufacturing	526	8.92	8.75	7.35–11.00	-	-	2	-	23	24	12	8	143	11	11	52	89	13	8	9	52	8	83	-	-	-	-
Nonmanufacturing	5,907	4.74	4.35	4.25– 5.09	449	423	3126	219	1231	55	13	11	16	7	5	72	36	58	58	84	6	-	14	14	10	-	-
Transportation and utilities	129	9.67	9.93	8.88–10.13	-	-	-	-	-	8	4	9	4	-	-	21	1	33	19	-	6	-	14	-	10	-	-

See footnotes at end of tables.

Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in Denver-Boulder, CO, December 1985

Sex,[4] occupation, and industry division	Number of workers	Average (mean[2]) hourly earnings (in dollars)[2]
Maintenance, toolroom, and powerplant occupations - men		
Maintenance carpenters	93	12.41
Maintenance electricians	415	14.01
Manufacturing	331	13.75
Maintenance painters	84	11.53
Maintenance machinists	213	13.49
Manufacturing	193	13.23
Maintenance mechanics (machinery)	944	12.61
Manufacturing	712	11.87
Nonmanufacturing	232	14.86
Motor vehicle mechanics	2,012	12.37
Manufacturing	133	11.94
Nonmanufacturing	1,879	12.40
Transportation and utilities	586	13.48
Maintenance workers (general)	791	8.81
Manufacturing	168	10.55
Nonmanufacturing	623	8.34
Transportation and utilities	31	8.82
Maintenance trades helpers	97	8.43
Machine-tool operators (toolroom)	88	12.90
Manufacturing	88	12.90
Tool and die makers	187	13.93
Manufacturing	187	13.93
Stationary engineers	316	13.89
Manufacturing	172	13.56
Nonmanufacturing	144	14.28
Material movement and custodial occupations - men		
Truckdrivers	5,420	10.25
Manufacturing	904	11.06
Nonmanufacturing	4,516	10.09
Transportation and utilities	1,536	12.24
Truckdrivers, light truck	628	5.97
Nonmanufacturing	595	5.85
Truckdrivers, medium truck	1,993	10.63
Manufacturing	101	9.16
Nonmanufacturing	1,892	10.71
Transportation and utilities	986	13.37
Truckdrivers, heavy truck	630	10.88
Manufacturing	491	11.39
Truckdrivers, tractor-trailer	1,904	11.07
Manufacturing	242	11.50
Nonmanufacturing	1,662	11.01
Transportation and utilities	248	11.32
Shippers	162	9.55
Manufacturing	88	8.55
Receivers	165	7.90
Manufacturing	90	8.10
Nonmanufacturing	75	7.66
Shippers and receivers	268	8.68
Nonmanufacturing	221	8.54
Order fillers	856	11.01
Nonmanufacturing	662	11.21
Material handling laborers:		
Manufacturing	355	7.38
Forklift operators:		
Manufacturing	293	11.22
Guards	3,077	5.40
Manufacturing	342	9.78
Guards I	1,966	4.39
Manufacturing	108	7.86
Nonmanufacturing	1,858	4.19
Janitors, porters, and cleaners	2,733	5.49
Nonmanufacturing	2,388	5.00
Transportation and utilities	100	9.43
Material movement and custodial occupations - women		
Truckdrivers	83	11.45
Nonmanufacturing	70	11.60
Shipping packers	227	7.83
Janitors, porters, and cleaners	3,209	4.71
Nonmanufacturing	3,107	4.56

See footnotes at end of tables.

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Table A-7. Indexes of earnings and percent increases for selected occupational groups, Denver-Boulder, CO, selected periods

Period[a]	All industries					Manufacturing					Nonmanufacturing			
	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Unskilled plant
Indexes (December 1977 = 100):														
December 1984	173.1	170.6	175.3	175.0	155.9	(*)	159.2	180.3	170.7	169.5	175.6	174.5	(*)	153.2
December 1985	177.6	177.5	182.7	180.1	157.3	(*)	165.7	(*)	180.8	174.6	178.6	181.1	(*)	153.8
Percent increases:														
December 1972 to December 1973	7.2	(*)	6.6	7.5	7.6	6.7	(*)	6.0	6.5	7.8	7.4	(*)	8.2	7.6
December 1973 to December 1974	10.5	11.0	10.4	9.2	10.9	11.2	(*)	12.2	9.3	12.6	10.3	11.1	(*)	10.5
December 1974 to December 1975	9.0	6.6	7.8	8.7	8.6	9.2	(*)	9.6	8.9	6.2	8.8	6.4	(*)	9.5
December 1975 to December 1976	7.0	6.5	8.0	8.0	9.2	6.8	(*)	8.7	8.1	9.4	7.1	5.9	(*)	9.2
December 1976 to December 1977	7.7	7.4	7.6	8.6	9.5	6.7	7.2	7.6	7.6	8.9	8.0	7.5	(*)	9.5
December 1977 to December 1978	7.8	7.1	6.9	9.4	7.7	(*)	7.8	7.5	9.7	8.4	7.7	6.7	(*)	7.5
December 1978 to December 1979	10.2	9.7	11.6	10.7	10.3	(*)	9.1	12.6	11.0	10.6	10.6	9.8	(*)	10.1
December 1979 to December 1980	10.8	11.0	12.9	11.0	10.5	10.7	8.3	13.2	10.5	8.2	10.9	11.9	(*)	11.2
December 1980 to December 1981	10.0	9.8	9.6	10.9	8.5	8.5	9.0	11.5	12.6	10.1	10.7	10.1	(*)	8.3
December 1981 to December 1982	8.2	9.0	6.4	8.0	5.3	6.9	6.0	4.7	6.7	6.3	8.8	10.0	(*)	5.1
December 1982 to December 1983	5.5	4.3	5.9	5.4	1.8	5.6	2.9	6.8	4.5	8.4	5.5	4.9	(*)	0.4
December 1983 to December 1984	4.7	4.9	5.4	3.2	2.0	5.1	5.1	5.5	4.5	3.0	4.6	4.8	(*)	1.8
December 1984 to December 1985	2.6	3.9	4.2	2.9	.9	4.6	4.1	(*)	2.3	3.1	1.7	3.8	(*)	.4

See footnotes at end of tables.

Table A-8. Pay relationships in establishments with paired office clerical occupations, Denver-Boulder, CO, December 1985

Occupation for which earnings are compared	Occupation for which average earnings equal 100																						
	Secretaries					Stenographers	Typists		File clerks			Messengers	Receptionists	Switchboard operators	Switchboard operator-receptionists	Order clerks		Accounting clerks				Payroll clerks	Key entry operators	
	I	II	III	IV	V	II	I	II	I	II	III					I	II	I	II	III	IV		I	II
Secretaries I	**100**	91	88	72	67	(*)	130	(*)	(*)	142	114	(*)	132	123	136	(*)	(*)	142	116	114	97	95	123	109
Secretaries II	110	**100**	97	75	60	(*)	128	116	142	137	(*)	151	120	112	115	(*)	93	123	118	106	98	97	119	105
Secretaries III	113	115	**100**	81	69	126	156	129	164	162	128	171	144	120	127	(*)	109	137	124	118	100	110	140	127
Secretaries IV	138	132	123	**100**	81	134	161	147	188	195	157	181	148	141	153	165	110	171	148	135	117	120	149	136
Secretaries V	150	167	145	123	**100**	138	206	178	232	221	168	223	198	176	173	(*)	104	211	181	182	149	155	207	155
Stenographers II	(*)	(*)	80	75	73	**100**	(*)	(*)	(*)	111	(*)	120	(*)	(*)	(*)	(*)	(*)	(*)	(*)	93	82	90	(*)	104
Typists I	77	78	64	62	49	(*)	**100**	83	117	110	87	104	(*)	99	100	(*)	(*)	93	97	87	70	76	94	81
Typists II	(*)	86	77	68	56	(*)	120	**100**	(*)	112	(*)	(*)	112	97	122	(*)	(*)	(*)	111	93	81	92	117	99
File clerks I	(*)	71	61	53	43	(*)	86	(*)	**100**	(*)	74	91	83	89	91	85	(*)	(*)	82	76	65	68	91	77
File clerks II	71	73	62	51	45	90	91	89	(*)	**100**	79	101	84	83	97	(*)	(*)	(*)	87	77	64	67	97	80
File clerks III	87	(*)	78	64	59	(*)	114	(*)	136	127	**100**	129	121	118	108	(*)	(*)	106	99	93	83	86	124	103
Messengers	(*)	66	59	55	45	83	96	(*)	110	99	78	**100**	91	85	92	(*)	(*)	101	90	77	69	70	83	79
Receptionists	76	83	70	68	51	(*)	(*)	89	121	119	83	110	**100**	98	(*)	(*)	(*)	(*)	102	91	81	76	112	93
Switchboard operators	81	89	83	71	57	(*)	101	103	113	120	84	118	102	**100**	(*)	105	(*)	101	92	94	78	80	102	84
Switchboard operator-receptionists	73	87	79	65	58	(*)	100	82	123	103	93	109	(*)	(*)	**100**	102	81	110	95	85	76	84	104	92
Order clerks I	(*)	(*)	(*)	61	(*)	(*)	(*)	(*)	117	(*)	(*)	(*)	(*)	95	98	**100**	(*)	(*)	91	78	(*)	81	80	87
Order clerks II	(*)	107	92	91	96	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	124	(*)	**100**	(*)	137	111	113	126	123	(*)
Accounting clerks I	71	81	73	58	47	(*)	108	(*)	(*)	94	99	(*)	99	91	(*)	(*)	(*)	**100**	83	78	66	83	91	78
Accounting clerks II	86	85	81	67	55	(*)	103	90	122	115	101	111	98	109	106	110	73	121	**100**	83	77	88	103	91
Accounting clerks III	88	94	85	74	55	108	116	108	131	130	107	130	109	106	118	126	90	129	121	**100**	84	92	108	96
Accounting clerks IV	103	103	100	85	67	121	142	124	154	156	121	144	124	129	131	(*)	88	153	130	119	**100**	100	134	115
Payroll clerks	105	103	91	84	65	111	132	109	147	149	116	142	131	125	120	123	80	121	114	109	100	**100**	119	110
Key entry operators I	81	84	71	67	48	(*)	107	86	110	103	80	121	90	98	96	125	81	110	97	93	75	84	**100**	83
Key entry operators II	92	95	79	73	64	97	123	101	130	125	97	133	107	119	109	115	(*)	128	110	104	87	91	121	**100**

NOTE. This matrix table shows the average (mean) relationship of earnings in establishments between any two occupations compared. Earnings for an occupation in the table stub are expressed as a percent of the earnings for an occupation in the column heading at the point where the data lines for the two intersect. For example, reading across the Secretaries II row, the 110 in the Secretaries I column indicates that Secretaries II average 110 percent of (or 10 percent more than) the earnings of Secretaries I.

See appendix A for method of computation.

Also see footnotes at end of tables.

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Table A-9. Pay relationships in establishments with paired professional and technical occupations, Denver-Boulder, CO, December 1985

Occupation for which earnings are compared	Occupation for which average earnings equal 100																
	Computer systems analysts (business)			Computer programmers (business)			Computer operators			Drafters				Electronics technicians			Registered industrial nurses
	I	II	III	I	II	III	I	II	III	II	III	IV	V	I	II	III	
Computer systems analysts (business) I	**100**	84	69	132	112	(*)	180	140	118	146	144	127	122	145	98	90	115
Computer systems analysts (business) II	120	**100**	82	142	123	101	199	154	126	183	161	135	122	171	(*)	105	125
Computer systems analysts (business) III	144	121	**100**	166	142	118	239	188	154	222	190	163	145	209	(*)	124	149
Computer programmers (business) I	76	70	60	**100**	81	68	139	119	100	(*)	117	95	(*)	104	81	77	88
Computer programmers (business) II	89	81	71	123	**100**	82	178	137	109	(*)	128	111	101	(*)	(*)	76	94
Computer programmers (business) III	(*)	99	85	148	121	**100**	(*)	160	135	(*)	(*)	126	(*)	(*)	164	(*)	109
Computer operators I	56	50	42	72	56	(*)	**100**	82	65	80	75	63	(*)	78	67	54	67
Computer operators II	72	65	53	84	73	63	122	**100**	83	106	94	81	75	98	(*)	65	75
Computer operators III	85	79	65	100	92	74	155	120	**100**	138	115	99	94	116	(*)	79	92
Drafters II	63	55	45	(*)	(*)	(*)	124	95	72	**100**	82	69	63	99	85	64	(*)
Drafters III	69	62	53	86	78	(*)	133	107	87	121	**100**	85	74	113	95	68	81
Drafters IV	79	74	61	105	90	79	158	124	101	145	117	**100**	87	126	109	79	96
Drafters V	82	82	69	(*)	99	(*)	(*)	133	107	160	135	114	**100**	176	136	91	101
Electronics technicians I	69	58	48	97	(*)	(*)	129	102	86	101	89	80	57	**100**	83	68	74
Electronics technicians II	102	(*)	(*)	123	(*)	61	149	(*)	(*)	118	105	92	74	121	**100**	82	90
Electronics technicians III	111	95	81	130	132	(*)	184	153	127	155	146	127	110	148	122	**100**	121
Registered industrial nurses	87	80	67	114	106	92	150	133	109	(*)	124	104	99	135	112	83	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

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Table A-10. Pay relationships in establishments with paired maintenance, toolroom, and powerplant occupations, Denver-Boulder, CO, December 1985

Occupation for which earnings are compared	Occupation for which average earnings equal 100										
	Carpenters	Electricians	Painters	Machinists	Maintenance mechanics (machinery)	Motor vehicle mechanics	Maintenance workers (general)	Trades helpers	Machine-tool operators (toolroom)	Tool and die makers	Stationary engineers
Maintenance carpenters	**100**	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Maintenance electricians	(*)	**100**	(*)	103	100	107	109	(*)	(*)	(*)	102
Maintenance painters	(*)	(*)	**100**	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Maintenance machinists	(*)	97	(*)	**100**	(*)	105	106	(*)	104	(*)	(*)
Maintenance mechanics (machinery)	(*)	100	(*)	(*)	**100**	105	111	141	(*)	92	103
Motor vehicle mechanics	(*)	94	(*)	95	96	**100**	104	133	(*)	(*)	102
Maintenance workers (general)	(*)	91	(*)	94	90	96	**100**	(*)	(*)	(*)	90
Maintenance trades helpers	(*)	(*)	(*)	(*)	71	75	(*)	**100**	(*)	(*)	80
Machine-tool operators (toolroom)	(*)	(*)	(*)	96	(*)	(*)	(*)	(*)	**100**	(*)	(*)
Tool and die makers	(*)	(*)	(*)	(*)	109	(*)	(*)	(*)	(*)	**100**	(*)
Stationary engineers	(*)	98	(*)	(*)	97	98	111	125	(*)	(*)	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

Table A-11. Pay relationships in establishments with paired material movement and custodial occupations, Denver-Boulder, CO, December 1985

Occupation for which earnings are compared	Occupation for which average earnings equal 100													
	Truckdrivers				Shippers	Receivers	Shippers and receivers	Warehouse-men	Order fillers	Material handling laborers	Forklift operators	Guards		Janitors, porters, and cleaners
	Light truck	Medium truck	Heavy truck	Tractor-trailer								I	II	
Truckdrivers, light truck	**100**	(*)	(*)	(*)	(*)	(*)	(*)	92	119	(*)	(*)	100	(*)	105
Truckdrivers, medium truck	(*)	**100**	(*)	94	(*)	(*)	93	111	102	115	99	(*)	(*)	117
Truckdrivers, heavy truck	(*)	(*)	**100**	98	(*)	(*)	(*)	114	(*)	118	(*)	(*)	(*)	(*)
Truckdrivers, tractor-trailer	(*)	106	102	**100**	(*)	(*)	104	109	103	115	104	148	(*)	132
Shippers	(*)	(*)	(*)	(*)	**100**	106	(*)	(*)	106	103	(*)	126	(*)	116
Receivers	(*)	(*)	(*)	(*)	94	**100**	(*)	114	107	108	(*)	122	(*)	123
Shippers and receivers	(*)	107	(*)	96	(*)	(*)	**100**	108	(*)	140	103	(*)	(*)	(*)
Warehousemen	109	90	88	92	(*)	88	93	**100**	104	105	98	(*)	107	119
Order fillers	84	98	(*)	97	94	93	(*)	96	**100**	102	99	(*)	(*)	127
Material handling laborers	(*)	87	85	87	97	93	72	95	98	**100**	97	137	(*)	115
Forklift operators	(*)	101	(*)	96	(*)	(*)	97	102	101	103	**100**	137	(*)	110
Guards I	100	(*)	(*)	67	79	82	(*)	(*)	(*)	73	73	**100**	70	(*)
Guards II	(*)	(*)	(*)	(*)	(*)	(*)	(*)	94	(*)	(*)	(*)	144	**100**	108
Janitors, porters, and cleaners	96	85	(*)	76	87	82	(*)	84	79	87	91	(*)	93	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

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Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Denver-Boulder, CO, December 1985

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	Under 190	190 and under 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 500	500 – 520	520 – 580	580 – 600	600 and over
Secretaries	2,376	39.5	378.50	382.00	315.00– 433.00	2	-	4	17	55	106	197	268	245	269	217	135	144	186	144	91	74	91	58	41	32
Manufacturing	1,254	40.0	386.00	388.50	325.00– 439.50	-	-	-	8	25	53	95	94	140	140	130	88	68	116	48	54	48	67	39	29	14
Nonmanufacturing	1,122	39.5	370.00	353.50	309.50– 423.00	2	-	4	9	30	53	102	174	105	129	87	47	76	70	98	37	26	24	19	12	18
Transportation and utilities	373	39.5	420.50	423.00	354.50– 457.50	-	-	-	-	1	4	16	37	21	29	17	12	28	50	67	22	12	22	12	7	16
Secretaries I	312	39.5	330.00	309.50	285.00– 347.50	-	-	-	3	21	39	65	66	29	19	19	5	16	7	1	1	3	5	7	4	2
Manufacturing	57	40.0	313.50	299.50	268.50– 354.50	-	-	-	3	11	5	10	3	6	7	4	2	4	2	-	-	-	-	-	-	-
Nonmanufacturing	255	39.0	333.50	309.50	290.00– 344.50	-	-	-	-	10	34	55	63	23	12	15	3	12	5	1	1	3	5	7	4	2
Secretaries II	709	39.5	344.50	332.50	299.50– 387.50	2	-	3	7	18	41	107	129	81	94	46	19	32	65	53	3	3	5	1	-	-
Manufacturing	353	40.0	344.00	322.50	292.50– 392.50	-	-	-	-	5	30	76	56	42	27	22	11	8	59	7	3	3	3	1	-	-
Nonmanufacturing	356	39.0	345.00	339.50	306.00– 377.50	2	-	3	7	13	11	31	73	39	67	24	8	24	6	46	-	-	2	-	-	-
Transportation and utilities	163	39.5	377.00	369.50	324.50– 444.50	-	-	-	-	1	4	7	25	18	23	8	6	20	4	45	-	-	2	-	-	-
Secretaries III	768	40.0	384.00	369.00	340.50– 420.50	-	-	1	2	7	6	11	47	117	119	124	81	56	46	46	34	31	25	9	2	4
Manufacturing	544	40.0	384.50	367.00	341.00– 414.00	-	-	-	-	-	3	3	31	90	88	97	63	37	27	24	26	27	18	8	2	-
Nonmanufacturing	224	40.0	383.00	369.50	337.50– 430.00	-	-	1	2	7	3	8	16	27	31	27	18	19	19	22	8	4	7	1	-	4
Transportation and utilities	51	40.0	437.50	434.00	360.00– 478.50	-	-	-	-	-	-	-	6	2	4	4	2	-	10	8	3	2	5	1	-	4
Secretaries IV	457	39.5	436.50	429.00	379.50– 498.00	-	-	-	-	-	5	8	23	17	37	28	27	34	65	35	46	19	53	25	25	9
Manufacturing	222	40.0	469.00	471.00	419.00– 507.00	-	-	-	-	-	-	-	1	1	18	7	12	18	26	12	25	13	44	19	18	8
Nonmanufacturing	235	39.5	405.50	417.00	352.00– 453.00	-	-	-	-	-	5	8	22	16	19	21	15	16	39	24	21	6	9	6	7	1
Transportation and utilities	102	39.5	445.50	436.00	423.00– 474.00	-	-	-	-	-	-	-	1	-	2	4	3	7	35	13	18	6	9	2	2	-
Secretaries V	91	39.5	524.00	505.50	468.50– 564.50	-	-	-	-	-	-	-	-	-	-	-	3	6	3	8	7	18	3	16	10	* 17
Nonmanufacturing	52	39.5	509.50	480.00	451.00– 558.50	-	-	-	-	-	-	-	-	-	-	-	3	5	1	5	7	13	1	5	1	11
Typists	153	39.5	272.00	240.00	222.00– 301.00	-	-	30	46	21	9	8	10	7	3	3	5	1	1	4	-	-	2	2	1	-
Manufacturing	64	40.0	279.00	250.50	227.50– 336.00	-	-	8	17	12	3	3	2	7	2	3	5	1	1	-	-	-	-	-	-	-
Nonmanufacturing	89	39.5	267.00	234.50	220.00– 282.50	-	-	22	29	9	6	5	8	-	1	-	-	-	-	4	-	-	2	2	1	-
Typists I	103	39.5	238.50	231.00	219.50– 249.50	-	-	29	41	15	5	4	8	-	-	-	1	-	-	-	-	-	-	-	-	-
Nonmanufacturing	77	39.5	238.50	231.00	219.50– 249.50	-	-	22	29	9	5	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Typists II	50	40.0	341.50	334.50	265.50– 384.00	-	-	1	5	6	4	4	2	7	3	3	4	1	1	4	-	-	2	2	1	-
File clerks	193	39.5	238.00	212.50	197.00– 258.00	* * 20	34	62	13	23	9	6	3	-	7	10	3	-	-	-	-	1	-	2	-	-
Nonmanufacturing	149	39.0	221.50	203.00	197.00– 231.00	18	29	60	10	14	8	4	3	-	-	-	-	-	-	-	-	1	-	2	-	-
File clerks II	111	39.0	243.50	212.00	203.00– 237.50	2	22	50	11	3	-	1	-	-	7	10	3	-	-	-	-	1	-	1	-	-
Nonmanufacturing	78	38.5	216.00	203.00	203.00– 213.50	-	18	48	10	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-
Messengers	110	39.5	224.00	213.50	203.50– 228.50	5	5	66	14	13	1	1	1	-	-	2	-	-	-	-	1	1	-	-	-	-
Nonmanufacturing	95	39.0	219.50	213.00	203.50– 219.50	5	4	64	10	8	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-
Receptionists	64	40.0	248.00	231.00	207.50– 284.50	-	1	19	18	3	6	11	2	1	1	1	-	1	-	-	-	-	-	-	-	-
Nonmanufacturing	51	40.0	237.00	230.50	204.50– 259.00	-	1	19	17	2	5	5	-	-	1	-	-	1	-	-	-	-	-	-	-	-
Switchboard operators	136	40.0	269.50	248.00	221.00– 306.50	4	2	25	23	19	16	11	8	4	5	11	4	2	1	-	-	-	1	-	-	-
Nonmanufacturing	106	40.0	257.00	240.50	214.00– 274.50	4	2	24	19	19	12	8	3	2	3	7	1	-	1	-	-	-	1	-	-	-
Accounting clerks	1,196	40.0	319.00	305.50	261.00– 349.00	6	-	38	114	128	155	102	154	185	70	38	41	45	11	14	18	12	18	29	18	-
Manufacturing	406	40.0	318.00	305.00	258.00– 361.00	-	-	9	53	48	44	24	56	33	33	24	31	15	3	4	12	8	-	6	3	-
Nonmanufacturing	790	40.0	319.50	305.50	265.00– 337.00	6	-	29	61	80	111	78	98	152	37	14	10	30	8	10	6	4	18	23	15	-
Accounting clerks I	97	40.0	237.50	234.50	230.00– 245.00	-	-	10	56	21	6	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	76	40.0	236.50	234.50	230.50– 244.00	-	-	6	46	19	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of tables.

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Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Denver-Boulder, CO, December 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																		
			Mean[2]	Median[2]	Middle range[2]	Under 190	190 and under 200	200 – 220	220 – 240	240 – 260	260 – 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 420	420 – 440	440 – 460	460 – 480	480 – 500	500 – 520	520 – 560	560 – 600	600 and over
Accounting clerks II	261	40.0	284.50	270.00	241.00– 301.50	6	-	18	18	63	55	31	25	7	1	3	-	26	3	-	5	-	-	-	-	-
Manufacturing	81	40.0	286.50	272.00	248.00– 304.00	-	-	3	4	24	17	7	14	3	-	2	-	1	2	-	4	-	-	-	-	-
Nonmanufacturing	180	40.0	283.50	270.00	240.00– 298.00	6	-	15	14	39	38	24	11	4	1	1	-	25	1	-	1	-	-	-	-	-
Accounting clerks III	509	40.0	312.50	317.00	269.00– 337.00	-	-	9	38	42	64	48	88	143	22	9	7	13	2	11	6	3	2	2	-	-
Manufacturing	123	40.0	329.50	319.50	286.00– 360.50	-	-	-	3	5	21	5	29	13	16	7	7	10	1	2	2	-	-	2	-	-
Nonmanufacturing	386	40.0	307.00	306.50	265.50– 337.00	-	-	9	35	37	43	43	59	130	6	2	-	3	1	9	4	3	2	-	-	-
Accounting clerks IV	262	40.0	357.50	350.50	304.50– 385.00	-	-	1	2	2	30	16	36	34	39	26	31	6	6	2	3	2	13	10	3	-
Manufacturing	94	40.0	371.50	383.50	321.50– 394.00	-	-	-	-	-	1	8	9	16	9	15	21	4	-	1	2	1	-	4	3	-
Nonmanufacturing	168	39.5	349.50	331.50	297.00– 374.00	-	-	1	2	2	29	8	27	16	30	11	10	2	6	1	1	1	13	6	-	-
Transportation and utilities	50	40.0	432.50	421.50	354.50– 508.50	-	-	-	-	-	-	-	-	1	16	1	4	-	6	1	1	1	13	6	-	-
Payroll clerks	123	40.0	326.50	311.50	273.50– 361.00	-	-	3	12	5	21	11	16	18	5	2	2	4	6	11	1	-	4	2	-	-
Manufacturing	50	40.0	341.50	325.50	273.50– 435.50	-	-	-	9	3	3	-	8	5	4	-	1	2	4	10	1	-	-	-	-	-
Nonmanufacturing	73	39.5	319.50	298.00	277.00– 334.50	-	-	3	3	2	18	11	8	13	1	2	1	2	2	1	-	-	4	2	-	-
Key entry operators	633	40.0	285.00	284.00	235.00– 330.00	19	52	64	31	133	47	63	46	41	18	25	29	46	6	3	2	7	-	1	-	-
Manufacturing	178	40.0	322.00	321.00	261.00– 390.50	3	2	4	14	19	17	11	19	8	14	19	20	26	1	1	-	-	-	-	-	-
Nonmanufacturing	455	39.5	270.50	254.00	215.00– 300.00	16	50	60	17	114	30	52	27	33	4	6	9	20	5	2	2	7	-	1	-	-
Transportation and utilities	98	40.0	361.50	345.00	320.00– 409.00	-	3	-	-	3	6	8	8	20	4	1	9	19	5	2	2	7	-	1	-	-
Key entry operators I	278	40.0	253.00	228.00	199.00– 296.00	19	51	62	10	45	13	14	15	21	4	-	4	19	1	-	-	-	-	-	-	-
Manufacturing	56	40.0	259.00	249.00	228.00– 299.50	3	2	4	10	14	6	3	9	2	3	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	222	40.0	251.50	217.00	194.50– 289.50	16	49	58	-	31	7	11	6	19	1	-	4	19	1	-	-	-	-	-	-	-
Key entry operators II	355	40.0	310.00	292.00	251.50– 369.50	-	1	2	21	88	34	49	31	20	14	25	25	27	5	3	2	7	-	1	-	-
Manufacturing	122	40.0	350.50	374.00	303.00– 399.50	-	-	-	4	5	11	8	10	6	11	19	20	26	1	1	-	-	-	-	-	-
Nonmanufacturing	233	39.5	288.50	268.00	245.00– 301.50	-	1	2	17	83	23	41	21	14	3	6	5	1	4	2	2	7	-	1	-	-

* Workers were distributed as follows: 7 at $600.00 to $640.00; 4 at $640.00 to $680.00; 4 at $680.00 to $720.00; and 2 at $720.00 to $760.00.

* * Workers were distributed as follows: 9 at $170.00 to $180.00; and 11 at $180.00 to $190.00.

Also see footnotes at end of tables.

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Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Denver-Boulder, CO, December 1985

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	Under 260	260 and under 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 440	440 – 480	480 – 520	520 – 560	560 – 600	600 – 640	640 – 680	680 – 720	720 – 760	760 – 800	800 – 840	840 – 880	880 and over
Computer systems analysts (business)	1,013	40.0	636.00	649.50	556.50– 718.00	–	–	–	4	–	5	8	14	48	47	59	88	107	100	139	145	81	71	36	38	23
Manufacturing	439	40.0	634.50	646.00	547.50– 718.00	–	–	–	4	–	5	2	2	14	24	35	38	41	45	60	62	42	30	17	11	7
Nonmanufacturing	574	39.5	641.00	653.00	557.00– 717.50	–	–	–	–	–	–	6	12	34	23	24	50	66	55	79	83	39	41	19	27	16
Computer systems analysts (business) I	207	39.5	499.50	483.00	427.00– 576.00	–	–	–	4	–	5	8	12	46	26	23	21	26	20	12	2	2	–	–	–	–
Manufacturing	91	40.0	502.50	502.00	438.50– 581.00	–	–	–	4	–	5	2	–	12	12	17	11	14	10	4	–	–	–	–	–	–
Nonmanufacturing	116	39.5	497.50	469.00	408.50– 576.00	–	–	–	–	–	–	6	12	34	14	6	10	12	10	8	2	2	–	–	–	–
Computer systems analysts (business) II	486	40.0	631.00	644.00	558.00– 695.00	–	–	–	–	–	–	–	2	2	21	36	61	66	49	85	94	37	23	7	2	1
Manufacturing	192	40.0	629.00	637.00	547.50– 709.50	–	–	–	–	–	–	–	2	2	12	18	23	20	20	31	29	15	11	6	2	1
Nonmanufacturing	294	40.0	632.00	652.50	567.50– 695.00	–	–	–	–	–	–	–	–	–	9	18	38	46	29	54	65	22	12	1	–	–
Computer systems analysts (business) III	320	40.0	739.00	734.00	667.00– 806.50	–	–	–	–	–	–	–	–	–	–	–	6	15	31	42	49	42	48	29	36	22
Manufacturing	156	40.0	718.00	712.00	662.50– 769.50	–	–	–	–	–	–	–	–	–	–	–	4	7	15	25	33	27	19	11	9	6
Nonmanufacturing	164	39.5	759.00	778.50	669.50– 847.00	–	–	–	–	–	–	–	–	–	–	–	2	8	16	17	16	15	29	18	27	16
Transportation and utilities	71	40.0	775.00	793.00	724.00– 807.00	–	–	–	–	–	–	–	–	–	–	–	2	–	1	3	9	12	25	2	11	6
Computer programmers (business)	613	39.5	562.50	556.00	472.00– 649.00	–	–	1	6	1	5	5	45	27	81	68	75	80	50	59	46	29	22	12	1	–
Nonmanufacturing	378	39.0	541.50	531.00	463.00– 606.50	–	–	1	1	–	1	1	42	15	68	48	56	48	24	28	18	13	7	6	1	–
Computer programmers (business) I	78	40.0	457.00	463.50	369.00– 509.00	–	–	1	6	1	1	5	8	4	18	23	5	1	4	1	–	–	–	–	–	–
Nonmanufacturing	52	40.0	482.50	461.00	434.00– 497.50	–	–	1	1	–	1	1	7	3	18	14	2	–	3	1	–	–	–	–	–	–
Computer programmers (business) II	247	39.5	528.00	537.50	461.50– 590.00	–	–	–	–	–	4	–	34	13	23	29	44	49	30	14	5	2	–	–	–	–
Manufacturing	101	40.0	537.00	560.00	464.00– 600.00	–	–	–	–	–	4	–	2	11	13	10	10	25	18	4	4	–	–	–	–	–
Nonmanufacturing	146	39.5	522.00	535.00	453.00– 584.00	–	–	–	–	–	–	–	32	2	10	19	34	24	12	10	1	2	–	–	–	–
Transportation and utilities	90	39.0	488.50	498.50	399.00– 542.50	–	–	–	–	–	–	–	32	1	6	13	21	10	5	2	–	–	–	–	–	–
Computer programmers (business) III	288	39.0	620.50	641.00	525.00– 703.00	–	–	–	–	–	–	–	3	10	40	16	26	30	16	44	41	27	22	12	1	–
Nonmanufacturing	180	38.5	580.00	567.00	472.00– 675.00	–	–	–	–	–	–	–	3	10	40	15	20	24	9	17	17	11	7	6	1	–
Computer operators	625	40.0	447.00	442.50	364.00– 511.00	14	24	17	20	30	42	38	37	80	82	100	26	8	102	5	–	–	–	–	–	–
Manufacturing	235	40.0	405.50	404.00	347.50– 466.00	6	16	8	4	14	25	22	19	33	47	12	23	5	1	–	–	–	–	–	–	–
Nonmanufacturing	390	40.0	472.00	482.00	390.50– 603.50	8	8	9	16	16	17	16	18	47	35	88	3	3	101	5	–	–	–	–	–	–
Computer operators I	75	40.0	321.00	292.50	267.00– 374.00	* 12	18	11	1	5	3	9	4	11	1	–	–	–	–	–	–	–	–	–	–	–
Computer operators II	326	40.0	418.00	415.50	352.50– 511.00	2	6	6	19	25	38	26	28	36	48	77	13	1	1	–	–	–	–	–	–	–
Manufacturing	123	40.0	398.50	390.00	345.50– 456.50	–	6	3	3	13	22	10	12	11	30	1	12	–	–	–	–	–	–	–	–	–
Nonmanufacturing	203	40.0	430.00	431.50	363.50– 511.00	2	–	3	16	12	16	16	16	25	18	76	1	1	1	–	–	–	–	–	–	–
Computer operators III	224	40.0	532.00	561.50	450.00– 603.50	–	–	–	–	–	1	3	5	33	33	23	13	7	101	5	–	–	–	–	–	–
Manufacturing	64	40.0	472.00	470.00	419.50– 524.00	–	–	–	–	–	1	3	3	13	16	11	11	5	1	–	–	–	–	–	–	–
Drafters	239	40.0	423.50	414.00	369.00– 476.00	1	3	3	11	17	17	24	28	39	39	33	10	9	4	1	–	–	–	–	–	–
Manufacturing	207	40.0	417.00	404.00	359.00– 472.00	1	3	3	11	17	17	22	25	31	30	28	9	6	4	–	–	–	–	–	–	–
Drafters III	73	40.0	389.50	390.00	359.00– 414.00	–	–	1	4	7	7	8	19	17	9	–	1	–	–	–	–	–	–	–	–	–
Manufacturing	64	40.0	385.00	384.50	349.50– 414.00	–	–	1	4	7	7	8	16	13	7	–	1	–	–	–	–	–	–	–	–	–
Drafters IV	85	40.0	470.00	465.00	425.00– 513.50	–	–	–	–	–	2	4	4	16	22	24	6	3	4	–	–	–	–	–	–	–
Manufacturing	72	40.0	469.00	465.00	419.00– 514.00	–	–	–	–	–	2	4	4	12	18	21	6	1	4	–	–	–	–	–	–	–

See footnotes at end of tables.

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Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Denver-Boulder, CO, December 1985 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[2]	Median[2]	Middle range[3]	Under 260	260 and under 280	280 – 300	300 – 320	320 – 340	340 – 360	360 – 380	380 – 400	400 – 440	440 – 480	480 – 520	520 – 560	560 – 600	600 – 640	640 – 680	680 – 720	720 – 760	760 – 800	800 – 840	840 – 880	880 and over
Electronics technicians	994	40.0	528.50	582.50	454.00– 582.50	1	6	21	27	17	38	28	34	59	48	54	75	472	21	33	33	25	2	-	-	-
Manufacturing	442	40.0	450.50	433.50	364.00– 530.00	1	6	21	27	17	38	28	34	59	47	40	22	62	14	17	7	1	1	-	-	-
Electronics technicians I	104	40.0	343.50	337.00	312.00– 368.00	-	4	12	22	16	17	12	9	9	3	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	104	40.0	343.50	337.00	312.00– 368.00	-	4	12	22	16	17	12	9	9	3	-	-	-	-	-	-	-	-	-	-	-
Electronics technicians II:																										
Manufacturing	142	40.0	397.00	395.50	354.50– 431.00	1	2	9	5	1	21	16	24	36	12	8	5	2	-	-	-	-	-	-	-	-
Electronics technicians III	257	39.5	581.00	585.00	505.00– 656.50	-	-	-	-	-	-	-	1	14	32	35	17	60	13	26	33	25	1	-	-	-
Manufacturing	191	40.0	543.00	555.00	480.00– 585.00	-	-	-	-	-	-	-	1	14	32	32	17	60	12	15	7	1	-	-	-	-
Registered industrial nurses	58	40.0	496.50	475.50	460.50– 539.50	-	-	-	-	-	-	1	4	5	20	10	7	4	5	2	-	-	-	-	-	-

* Workers were distributed as follows: 2 at $220.00 to $240.00; and 10 at $240.00 to $260.00.
Also see footnotes at end of tables.

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Table A-14. Average weekly earnings of office, professional, and technical workers, by sex in establishments employing 500 workers or more in Denver-Boulder, CO, December 1985

Sex,[4] occupation, and industry division	Number of workers	Average (mean[5])	
		Weekly hours[1] (standard)	Weekly earnings (in dollars)[2]
Office occupations - men			
Messengers	64	39.5	222.50
Nonmanufacturing	57	39.5	220.50
Office occupations - women			
Secretaries	2,188	39.5	380.00
Manufacturing	1,253	40.0	386.00
Nonmanufacturing	935	39.5	371.50
Transportation and utilities	330	40.0	419.50
Secretaries I:			
Manufacturing	57	40.0	313.50
Secretaries II	688	39.5	342.50
Manufacturing	353	40.0	344.00
Nonmanufacturing	335	39.0	341.50
Transportation and utilities	142	40.0	373.50
Secretaries III	709	40.0	385.50
Manufacturing	543	40.0	384.50
Nonmanufacturing:			
Transportation and utilities	51	40.0	437.50
Secretaries IV	427	40.0	435.50
Manufacturing	222	40.0	469.00
Nonmanufacturing	205	39.5	399.50
Secretaries V	87	39.5	525.50
Typists	136	39.5	279.00
Manufacturing	59	40.0	284.00
Nonmanufacturing	77	39.5	275.00
Typists I	86	39.5	242.50
Typists II	50	40.0	341.50
File clerks	165	39.0	240.50
Nonmanufacturing	121	39.0	221.00
File clerks II	91	39.0	252.00
Receptionists	60	40.0	247.50
Switchboard operators	128	40.0	268.00
Nonmanufacturing	98	40.0	253.50
Accounting clerks	971	40.0	320.00
Manufacturing	344	40.0	317.50
Nonmanufacturing	627	40.0	321.00
Accounting clerks I	97	40.0	237.50
Manufacturing	76	40.0	236.50
Accounting clerks II	219	40.0	288.50
Nonmanufacturing	160	40.0	287.50
Accounting clerks III	398	40.0	315.50
Accounting clerks IV:			
Manufacturing	87	40.0	369.50
Nonmanufacturing:			
Transportation and utilities	38	40.0	412.00
Payroll clerks	116	40.0	327.00
Manufacturing	50	40.0	341.50
Nonmanufacturing	66	39.5	316.00
Key entry operators	518	40.0	290.00
Manufacturing	174	40.0	324.00
Nonmanufacturing:			
Transportation and utilities	87	40.0	363.50
Key entry operators I	245	40.0	252.50
Manufacturing	52	40.0	260.50
Nonmanufacturing	193	40.0	250.50
Key entry operators II:			
Manufacturing	122	40.0	350.50
Professional and technical occupations - men			
Computer systems analysts (business)	617	40.0	664.50
Manufacturing	271	40.0	668.00
Nonmanufacturing	346	40.0	662.50
Transportation and utilities	189	40.0	676.00
Computer systems analysts (business) I	106	39.5	517.50
Manufacturing	50	40.0	518.50
Nonmanufacturing	56	39.5	516.50
Computer systems analysts (business) II	293	40.0	646.00
Manufacturing	113	40.0	662.50
Nonmanufacturing	180	40.0	636.00
Computer systems analysts (business) III	218	40.0	761.50
Manufacturing	108	40.0	742.50
Nonmanufacturing	110	39.5	779.50
Transportation and utilities	51	40.0	777.50
Computer operators	294	40.0	430.00
Nonmanufacturing	186	40.0	444.00
Computer operators II	150	40.0	400.00
Manufacturing	59	40.0	394.50
Nonmanufacturing	91	40.0	403.50
Transportation and utilities	31	40.0	475.50
Computer operators III	107	40.0	521.00
Nonmanufacturing	73	40.0	543.00
Drafters	153	40.0	445.50
Manufacturing	129	40.0	440.00
Drafters IV	62	40.0	481.50
Manufacturing	53	40.0	480.50
Electronics technicians:			
Electronics technicians III:			
Manufacturing	156	40.0	556.50
Professional and technical occupations - women			
Computer systems analysts (business)	353	39.5	596.50
Nonmanufacturing	216	39.5	610.50
Computer systems analysts (business) I	99	39.5	478.00
Computer systems analysts (business) II	173	40.0	615.00
Manufacturing	67	40.0	590.00
Nonmanufacturing	106	40.0	630.50
Computer systems analysts (business) III:			
Nonmanufacturing	52	39.0	721.00
Computer operators	296	40.0	471.50
Computer operators II	157	40.0	436.50
Manufacturing	55	40.0	410.50
Nonmanufacturing	102	40.0	453.50
Computer operators III	107	40.0	551.00
Registered industrial nurses	55	40.0	494.00

See footnotes at end of tables.

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Table A-15. Hourly earnings of maintenance, toolroom, and powerplant workers in establishments employing 500 workers or more in Denver-Boulder, CO, December 1985

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[2]			Number of workers receiving straight-time hourly earnings (in dollars) of —																				
		Mean[2]	Median[2]	Middle range[2]	Under 8.25	8.25 and under 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 13.50	13.50 – 14.00	14.00 – 14.50	14.50 – 15.00	15.00 – 15.50	15.50 – 16.00	16.00 – 16.50	16.50 – 17.00	17.00 – 17.50	17.50 – 18.00	18.00 – 18.50	18.50 – 19.00
Maintenance carpenters	75	12.47	13.27	12.24–13.27	-	-	-	3	6	4	4	-	-	5	8	36	8	-	-	-	-	-	1	-	-	-	-
Maintenance electricians	373	14.21	14.08	13.54–15.40	2	2	-	-	4	1	2	20	4	4	26	2	102	33	14	95	-	55	7	-	-	-	-
Manufacturing	302	13.97	13.54	13.54–15.40	-	-	-	-	-	-	2	20	4	4	26	2	101	33	14	95	-	1	-	-	-	-	-
Maintenance machinists	178	13.81	13.27	13.27–14.95	-	-	-	-	-	2	-	3	-	-	30	84	4	9	6	19	-	21	-	-	-	-	-
Manufacturing	157	13.50	13.27	13.27–13.27	-	-	-	-	-	2	-	3	-	-	30	84	4	9	6	19	-	-	-	-	-	-	-
Maintenance mechanics (machinery)	547	14.14	15.40	13.47–16.06	-	50	-	5	7	9	2	26	1	1	31	76	-	-	21	166	-	119	15	2	16	-	-
Manufacturing	389	13.27	13.47	11.13–15.40	-	50	-	5	7	9	2	26	1	1	31	76	-	-	15	166	-	-	-	-	-	-	-
Motor vehicle mechanics	623	14.00	13.65	12.65–15.02	-	6	-	-	3	2	29	1	55	55	60	52	108	12	68	55	11	-	26	8	30	40	2
Manufacturing	65	12.49	12.65	12.23–13.00	-	6	-	-	3	2	1	1	2	2	24	12	-	1	5	6	-	-	-	-	-	-	-
Nonmanufacturing	558	14.18	13.65	12.65–15.02	-	-	-	-	-	-	28	-	53	53	36	40	108	11	63	49	11	-	26	8	30	40	2
Transportation and utilities	504	14.15	13.65	12.40–15.15	-	-	-	-	-	-	28	-	53	53	36	26	108	-	63	20	11	-	26	8	30	40	2
Maintenance workers (general)	211	11.15	12.10	8.26–13.50	* 51	2	15	1	2	3	2	22	3	29	20	7	15	3	17	19	-	-	-	-	-	-	-
Manufacturing	99	12.39	13.50	8.76–14.95	19	1	6	-	-	-	-	-	2	-	15	5	14	1	17	19	-	-	-	-	-	-	-
Nonmanufacturing	112	10.05	11.00	7.15–12.48	32	1	9	1	2	3	2	22	1	29	5	2	1	2	-	-	-	-	-	-	-	-	-
Tool and die makers	164	14.27	14.35	14.31–14.87	-	-	-	-	-	-	-	16	-	2	9	4	2	83	8	23	5	6	5	-	1	-	-
Manufacturing	164	14.27	14.35	14.31–14.87	-	-	-	-	-	-	-	16	-	2	9	4	2	83	8	23	5	6	5	-	1	-	-
Stationary engineers	260	13.75	13.42	13.27–14.56	-	-	-	-	-	1	2	6	16	14	3	98	22	3	47	42	-	2	-	4	-	-	-
Manufacturing	167	13.63	13.27	13.27–15.24	-	-	-	-	-	1	1	2	8	12	1	92	7	1	-	42	-	-	-	-	-	-	-
Nonmanufacturing	93	13.97	14.56	13.58–14.56	-	-	-	-	-	-	1	4	8	2	2	6	15	2	47	-	-	2	-	4	-	-	-

* Workers were distributed as follows: 37 under $7.50; 6 at $7.50 to $7.75; 7 at $7.75 to $8.00; and 1 at $8.00 to $8.25.

Also see footnotes at end of tables.

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Table A-16. Hourly earnings of material movement and custodial workers in establishments employing 500 workers or more in Denver-Boulder, CO, December 1985

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																				
		Mean[2]	Median[2]	Middle range[3]	4.00 and under 4.50	4.50 – 5.00	5.00 – 5.50	5.50 – 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 13.50	13.50 – 14.00	14.00 – 14.50	14.50 – 15.00	15.00 – 16.00
Truckdrivers	1,698	12.87	12.94	12.15–14.64	–	–	3	9	4	6	26	25	13	12	9	3	10	49	39	69	257	393	136	144	62	415	22
Manufacturing	385	11.44	12.00	11.36–12.15	–	–	3	5	4	6	27	11	5	6	4	2	5	3	33	30	185	8	–	10	58	–	–
Nonmanufacturing	1,313	13.29	13.10	12.94–14.64	–	–	–	4	–	–	1	14	8	6	5	1	5	48	6	39	92	375	136	134	4	415	22
Truckdrivers, light truck	55	7.94	7.88	6.38– 8.65	–	–	3	9	2	3	2	13	9	5	–	–	–	–	–	9	–	–	–	–	–	–	–
Truckdrivers, tractor-trailer	860	12.73	12.94	12.66–13.10	–	–	–	–	–	–	24	5	–	–	7	1	8	49	5	15	92	360	136	44	62	30	22
Manufacturing	119	11.91	13.90	9.20–14.20	–	–	–	–	–	–	24	5	–	–	2	1	5	3	1	3	–	7	–	10	58	–	–
Nonmanufacturing	741	12.87	12.94	12.66–13.10	–	–	–	–	–	–	–	–	–	–	5	–	3	46	4	12	92	353	136	34	4	30	22
Transportation and utilities	93	14.41	14.74	13.75–14.74	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	–	34	4	30	22
Shippers and receivers	100	9.81	12.49	6.27–12.49	2	1	9	4	9	7	4	5	–	–	–	–	2	–	4	–	51	2	–	–	–	–	–
Nonmanufacturing	75	10.99	12.49	11.28–12.49	–	1	5	–	–	5	4	3	–	–	–	–	–	–	4	–	51	2	–	–	–	–	–
Warehousemen	997	11.19	11.90	9.00–13.35	–	–	15	53	22	20	26	14	8	15	108	14	17	49	83	71	195	20	112	84	1	2	70
Manufacturing	361	9.69	10.61	6.57–12.75	–	–	15	53	22	20	24	14	5	5	1	–	3	26	72	3	7	1	60	28	1	1	–
Nonmanufacturing	636	12.05	12.45	10.98–13.35	–	–	–	–	–	–	2	–	3	10	105	14	14	23	11	68	188	19	52	56	–	1	70
Transportation and utilities	385	12.14	11.90	9.00–13.71	–	–	–	–	–	–	–	–	1	–	99	–	7	22	4	68	3	2	52	56	–	1	70
Order fillers	724	11.94	12.45	11.30–12.45	–	–	–	–	–	–	–	–	–	–	–	81	4	22	100	–	467	50	–	–	–	–	–
Material handling laborers	600	10.45	12.02	8.00–13.05	8	10	13	47	13	9	13	14	97	3	–	–	–	1	45	9	129	12	120	57	–	–	–
Manufacturing	121	8.09	6.90	5.80–11.30	–	–	11	39	6	8	4	3	7	3	–	–	–	–	19	–	21	–	–	–	–	–	–
Nonmanufacturing	479	11.04	12.27	8.00–13.05	8	10	2	8	7	1	9	11	90	–	–	–	–	1	26	9	108	12	120	57	–	–	–
Forklift operators	452	11.66	12.49	11.35–13.40	–	–	5	2	21	–	16	7	9	15	12	9	3	2	15	51	114	26	134	11	–	–	–
Manufacturing	301	11.22	11.66	9.00–13.40	–	–	5	2	21	–	16	7	9	14	10	9	3	2	15	50	4	–	134	–	–	–	–
Nonmanufacturing	151	12.54	12.49	12.49–12.49	–	–	–	–	–	–	–	–	–	1	2	–	–	–	–	1	110	26	–	11	–	–	–
Guards	535	9.04	9.30	6.43–11.75	–	23	24	55	40	17	12	8	52	26	17	39	17	14	4	175	–	–	–	12	–	–	–
Manufacturing	384	9.56	10.18	8.06–11.75	–	6	7	31	22	13	10	5	51	15	10	6	17	14	4	173	–	–	–	–	–	–	–
Nonmanufacturing	151	7.72	6.43	5.50– 9.99	–	17	17	24	18	4	2	3	1	11	7	33	–	–	–	2	–	–	–	12	–	–	–
Guards I	236	7.29	7.18	5.80– 8.66	–	23	24	36	25	6	7	6	43	16	9	35	1	3	–	2	–	–	–	–	–	–	–
Manufacturing	115	7.14	7.60	5.80– 8.06	–	6	7	26	9	4	5	3	42	5	2	2	1	3	–	–	–	–	–	–	–	–	–
Nonmanufacturing	121	7.41	6.86	5.25– 9.60	–	17	17	10	16	2	2	3	1	11	7	33	–	–	–	2	–	–	–	–	–	–	–
Janitors, porters, and cleaners:																											
Manufacturing	339	9.82	9.49	8.70–11.61	2	–	12	6	12	8	9	6	11	52	69	2	6	1	52	8	83	–	–	–	–	–	–
Nonmanufacturing:																											
Transportation and utilities	89	10.27	9.93	9.78–10.13	–	–	–	–	–	–	–	–	–	17	1	33	19	–	2	–	12	–	5	–	–	–	–

See footnotes at end of tables.

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Table A-17. Average hourly earnings of maintenance, toolroom, powerplant, material movement and custodial workers by sex in establishments employing 500 workers or more in Denver-Boulder, CO, December 1985

Sex,[1] occupation, and industry division	Number of workers	Average (mean[2]) hourly earnings (in dollars)[3]
Maintenance, toolroom, and powerplant occupations - men		
Maintenance carpenters	75	12.47
Maintenance electricians	368	14.22
Manufacturing	299	13.99
Maintenance machinists	176	13.80
Manufacturing	156	13.51
Maintenance mechanics (machinery)	546	14.14
Manufacturing	389	13.27
Motor vehicle mechanics	546	13.65
Manufacturing	65	12.49
Nonmanufacturing	481	13.81
Maintenance workers (general)	205	11.16
Manufacturing	99	12.39
Nonmanufacturing	106	10.01
Tool and die makers	164	14.27
Manufacturing	164	14.27
Stationary engineers	253	13.72
Manufacturing	165	13.61
Nonmanufacturing	88	13.94
Material movement and custodial occupations - men		
Truckdrivers	1,639	12.85
Manufacturing	375	11.47
Nonmanufacturing	1,264	13.26
Truckdrivers, light truck	51	8.00
Truckdrivers, tractor-trailer	847	12.73
Manufacturing	116	11.85
Nonmanufacturing	731	12.86
Transportation and utilities	92	14.41
Shippers and receivers	79	10.29
Nonmanufacturing	69	10.95
Order fillers	563	12.24
Forklift operators	408	11.71
Manufacturing	284	11.32
Nonmanufacturing	124	12.60
Guards	433	9.07
Manufacturing	318	9.76
Nonmanufacturing	115	7.12
Guards I	181	7.33
Manufacturing	84	7.29
Nonmanufacturing	97	7.36
Janitors, porters, and cleaners	1,169	6.55
Nonmanufacturing:		
Transportation and utilities	60	10.16

See footnotes at end of tables.

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Footnotes

Some of these standard footnotes may not apply to this bulletin.

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates), and the earnings correspond to these weekly hours.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts. Also excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or year-end bonuses, and other nonproduction bonuses. Cost-of-living allowances and incentive payments, however, are included.

[3] The mean is computed for each job by totaling the earnings of all workers and dividing by the number of workers. The median designates position—one-half of the workers receive the same as or more and one-half receive the same as or less than the rate shown. The middle range is defined by two rates of pay; one-fourth of the workers earn the same as or less than the lower of these rates and one-fourth earn the same as or more than the higher rate.

[4] Earnings data relate only to workers whose sex identification was provided by the establishment.

[5] Estimates for periods ending prior to 1976 relate to men only for skilled maintenance and unskilled plant workers. All other estimates relate to men and women.

[6] Data do not meet publication criteria or data not available.

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Appendix A. Scope and Method of Survey

In each of the 70 areas[1] currently surveyed, the Bureau obtains wages and related benefits data from representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Government operations and the construction and extractive industries are excluded. Small establishments—generally those with fewer than 50 employees—are excluded because they have few incumbents in the occupations studied. Appendix table 1 shows the number of establishments and workers estimated to be within the scope of this survey, as well as the number actually studied.

Bureau field representatives obtain data by personal visits at 3-year intervals. In each of the two intervening years, only information on employment and occupational earnings is collected by a combination of personal visit, mail questionnaire, and telephone interview from establishments participating in the previous survey.

A sample of the establishments in the scope of the survey is selected for study prior to each personal visit survey. This sample, minus establishments which go out of business or are no longer within the industrial scope of the survey, is retained for the following two annual surveys. In most cases, establishments new to the area are not considered in the scope of the survey until the selection of a sample for a personal visit survey.

The sampling procedures involve detailed stratification of all establishments within the scope of an individual area survey by industry and number of employees. From this stratified universe a probability sample is selected, with each establishment having a predetermined chance of selection. To obtain optimum accuracy at minimum cost, a greater proportion of large than small establishments is selected. When data are combined, each establishment is weighted according to its probability of selection so that unbiased estimates are generated. For example, if one out of four establishments is selected, it is given a weight of 4 to represent itself plus three others. An alternate of the same original probability is chosen in the same industry-size classification if data are not available from the original sample member. If no suitable substitute is available, additional weight is assigned to a sample member that is similar to the missing unit.

Occupations and earnings

Occupations selected for study are common to a variety of manufacturing and nonmanufacturing industries, and are of the following types: (1) Office clerical; (2) professional and technical; (3) maintenance, toolroom, and powerplant; and (4) material movement and custodial. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. Occupations selected for study are listed and described in appendix B. Occupational codes and titles from the 1980 edition of the *Standard Occupational Classification Manual* are also presented in appendix B.

Unless otherwise indicated, the earnings data following the job titles are for all industries combined. Earnings data for some of the occupations listed and described, or for some industry divisions within the scope of the survey, are not presented in the A-series tables because either (1) data were insufficient to provide meaningful statistical results, or (2) there is possibility of disclosure of individual establishment data. Separate men's and women's earnings data are not presented when the number of workers not identified by sex is 20 percent or more of the men or women identified in an occupation. Earnings data not shown separately for industry divisions are included in data for all industries combined. Likewise, for occupations with more than one level, data are included in the overall classification when a subclassification is not shown or information to subclassify is not available.

Occupational employment and earnings data are shown for full-time workers, i.e., those hired to work a regular weekly schedule. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Also excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or year-end bonuses, and other nonproduction bonuses. Pay increases - but not bonuses - under cost-of-living allowance clauses, and incentive payments, however, are included. Weekly hours for office clerical and professional and technical occupations refer to the standard workweek (rounded to the nearest half hour) for which employees receive regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates). Average weekly earnings for these occupations are rounded to the nearest half dollar. Most A-series tables provide distributions of workers by earnings; changes in the size of earnings intervals are indicated by heavy vertical lines.

These surveys measure the level of occupational earnings in an area at a particular time. Changes in an occupational average over time reflect, in addition to earnings changes, factors such as changes in proportions of workers employed by high- or low-wage firms, or high-wage workers advancing to better jobs and being replaced by new workers at lower rates. Such shifts in employment could decrease an occupational

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average even though most establishments in an area increase wages during the year. Changes in earnings of occupational groups, shown in table A-7, are better indicators of wage trends than are earnings changes for individual jobs within the groups.

Average earnings reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing, and thus contribute differently to the estimates for each job. Pay averages may fail to reflect accurately the wage differential among jobs in individual establishments.

Average pay levels for men and women in selected occupations should not be assumed to reflect differences in pay of the sexes within individual establishments. Factors which may contribute to differences include progression within established rate ranges (only the rates paid incumbents are collected) and performance of specific duties within the general survey job descriptions. Job descriptions used to classify employees in these surveys usually are more generalized than those used in individual establishments and allow for minor differences among establishments in specific duties performed.

Occupational employment estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. Because occupational structures among establishments differ, estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the jobs studied. These differences in occupational structure do not affect materially the accuracy of the earnings data.

Wage trends for selected occupational groups

Indexes in table A-7 measure wages at a given time, expressed as a percent of wages during the base period. Subtracting 100 from the index yields the percent change in wages from the base period to the date of the index. The percent increases in table A-7 relate to wage changes between the indicated dates. Annual rates of increase, where shown, reflect the amount of increase for 12 months when the time span between surveys was other than 12 months. These computations are based on the assumption that wages increased at a constant rate between surveys.

The indexes and percent increases are based on changes in average hourly earnings of men and women in establishments reporting the trend jobs in both the current and previous year (matched establishments). The data are adjusted to remove the effect on average earnings of employment shifts among establishments and turnover of establishments included in survey samples. The percent increases, however, are still affected by factors other than wage increases. Turnover may affect an establishment average for an occupation when workers are paid under plans providing a range of wage rates for individual jobs. In periods of increased hiring, for example, new employees may enter at the bottom of the range, depressing the average without a change in wage rates.

Occupations used to compute wage trends are:

Office clerical

Secretaries
Stenographers I and II
Typists I and II
File clerks I, II, and III
Messengers
Switchboard operators
Order clerks I and II
Accounting clerks I, II, III, and IV
Payroll clerks
Key entry operators I and II

Electronic data processing

Computer systems analysts I, II, and III
Computer programmers I, II, and III
Computer operators I, II, and III

Industrial nurses

Registered industrial nurses

Skilled maintenance

Carpenters
Electricians
Painters
Machinists
Mechanics (machinery)
Pipefitters
Motor vehicle mechanics
Tool and die makers

Unskilled plant

Janitors, porters, and cleaners
Material handling laborers

Percent changes for individual areas in the program are computed as follows:

1. Average earnings are computed for each occupation for the 2 years being compared. The averages are derived from earnings in those establishments which are in the survey both years; it is assumed that employment remains unchanged.

2. Each occupation is assigned a weight based on its proportionate employment in the occupational group.

3. These weights are used to compute group averages. Each occupation's average earnings (computed in step 1) are multiplied by its weight. The products are totaled to obtain a group average.

4. The ratio of group averages for 2 consecutive years is computed by dividing the average for the current year by the average for the earlier year. The result—expressed as a percent—less 100 is the percent change.

The index is computed by adding 100 to the most recent percent increase, multiplying the total by the previous year's index number, and dividing the product by 100 to obtain the current index value.

Pay relationships in establishments

Tables A-8 through A-11 compare average pay of occupations in individual establishments. These comparisons, expressed as pay relatives (pay for one of the occupations equals 100), yield different results than comparisons of overall survey averages, such as those shown in tables A-1 through A-6. The latter reflect differences in contributions to the survey averages by establishments with disparate pay levels; the pay relative comparisons are not affected by such differences. The following procedures are used to compute relatives in tables A-8 through A-11:

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1. Establishments employing workers in both of the paired occupations were identified.

2. Pay levels (averages) for the two occupations were weighted by the combined employment of both jobs to reflect each establishment's contribution to the totals used in this comparison.

3. The weighted pay levels of the two jobs were summed separately; each total was divided by the other and the quotients multiplied by 100 to produce the two pay relatives shown for each job pairing.

Establishment practices and employee benefits

Tabulations on selected establishment practices and employee benefits (B-series tables) are not presented in this bulletin. Information for these tabulations is collected at 3-year intervals. These tabulations on minimum entrance salaries for inexperienced office workers; shift differentials; scheduled weekly hours and days; paid holidays; paid vacations; health, insurance, and retirement plans; and other selected benefits are presented (in the B-series tables) in previous bulletins for this area.

[1] The Bureau also conducts more limited area studies in approximately 96 areas at the request of the Employment Standards Administration of the U.S. Department of Labor.

Appendix table 1. Establishments and workers within scope of survey and number studied in Denver-Boulder, CO,[1] December 1985

Industry division[2]	Minimum employment in establishments in scope of survey	Number of establishments		Workers in establishments		
		Within scope of survey[3]	Studied	Within scope of survey[4]		Studied
				Number	Percent	
All establishments						
All divisions	-	1,439	197	327,365	100	149,144
Manufacturing	50	245	52	91,442	28	59,745
Nonmanufacturing	-	1,194	145	235,923	72	89,399
Transportation, communication, and other public utilities[5]	50	104	28	42,438	13	30,779
Wholesale trade[6]	50	215	20	25,786	8	5,512
Retail trade[6]	50	354	32	75,772	23	35,979
Finance, insurance, and real estate[6]	50	179	19	41,058	13	7,950
Services[6 7]	50	342	46	50,869	16	9,179
Large establishments						
All divisions	-	102	58	159,560	100	123,977
Manufacturing	500	32	24	61,345	38	54,774
Nonmanufacturing	-	70	34	98,215	62	69,203
Transportation, communication, and other public utilities[5]	500	9	8	31,215	20	27,833
Wholesale trade[6]	500	4	3	3,518	2	2,848
Retail trade[6]	500	28	14	38,605	24	30,413
Finance, insurance, and real estate[6]	500	17	5	16,694	10	5,486
Services[6 7]	500	12	4	8,183	5	2,623

[1] The Denver-Boulder, CO Standard Metropolitan Statistical Area, as defined by the Office of Management and Budget through February 1974, consists of Adams, Arapahoe, Boulder, Denver, Douglas, Gilpin, and Jefferson Counties. The "workers within scope of survey" estimates provide a reasonably accurate description of the size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison with other statistical series to measure employment trends or levels since (1) planning of wage surveys requires establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are excluded from the scope of the survey.

[2] The 1972 edition of the *Standard Industrial Classification Manual* was used to classify establishments by industry division. All government operations are excluded from the scope of the survey.

[3] Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of nonmanufacturing companies are considered as one establishment when located within the same industry division.

[4] Includes all workers in all establishments with total employment (within the area) at or above the minimum limitation.

[5] Abbreviated to "transportation and utilities" in the A-series tables. Taxicabs and services incidental to water transportation are excluded.

[6] Separate data for this division are not presented in the A-series tables, but the division is represented in the "all industries" and "nonmanufacturing" estimates.

[7] Hotels and motels; laundries and other personal services; business services; automobile repair, rental, and parking; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

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Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits grouping of occupational wage rates representing comparable job content. Because of this emphasis on comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude working supervisors; apprentices; and part-time, temporary, and probationary workers. Handicapped workers whose earnings are reduced because of their handicap are also excluded. Learners, beginners, and trainees, unless specifically included in the job description, are excluded.

The titles and 2, 3, or 4-digit codes below the job titles in this appendix are taken from the 1980 edition of the *Standard Occupational Classification Manual (SOC)* , issued by the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

In general, the Bureau of Labor Statistics' occupational descriptions are much more specific than those found in the SOC manual. The BLS occupation, "Registered Industrial Nurse," for example, is limited to workers providing medical assistance and other related services (e.g., health education) to persons who are ill or become ill or suffer an injury in a factory or other establishment. The SOC occupation (code 29) includes a variety of registered nurses (e.g., school nurse, head nurse, general duty nurse, private duty nurse) that are excluded from the BLS description.

Thus, in comparing the results of this survey with other sources, factors such as differences in occupational definitions and survey scope should be taken into consideration.

Office

SECRETARY

(4622: Secretary)

Provides principal secretarial support in an office, usually to one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently, receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office.

Exclusions. Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

a. Clerks or secretaries working under the direction of secretaries or administrative assistants as described in e;

b. Stenographers not fully performing secretarial duties;

c. Stenographers or secretaries assigned to two or more professional, technical, or managerial persons of equivalent rank;

d. Assistants or secretaries performing any kind of technical work, e.g., personnel, accounting, or legal work;

e. Administrative assistants or supervisors performing duties which are more difficult or more responsible than the secretarial work described in LR-1 through LR-4;

f. Secretaries receiving additional pay primarily for maintaining confidentiality of payroll records or other sensitive information;

g. Secretaries performing routine receptionist, typing, and filing duties following detailed instructions and guidelines; these duties are less responsible than those described in LR-1 below;

h. Trainees.

Classification by level. Secretary jobs which meet the required characteristics are matched at one of five levels according to two factors: (a) Level of the secretary's supervisor within the overall organizational structure, and (b) level of the secretary's responsibility. The table following the explanations of these factors indicates the level of the secretary for each combination of factors.

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Level of Secretary's Supervisor (LS)

Secretaries should be matched at one of the three LS levels below best describing the organization of the secretary's supervisor.

LS-1

Organizational structure is not complex and internal procedures and administrative controls are simple and informal: supervisor directs staff through face-to-face meetings.

LS-2

Organizational structure is complex and is divided into subordinate groups that usually differ from each other as to subject matter, function, etc.; supervisor usually directs staff through intermediate supervisors; internal procedures and administrative controls are formal. An entire organization (e.g., division, subsidiary, or parent organization) may contain a variety of subordinate groups which meet the LS-2 definition. Therefore, it is not unusual for one LS-2 supervisor to report to another LS-2 supervisor.

The presence of subordinate supervisors does not by itself mean LS-2 applies, e.g., a clerical processing organization divided into several units, each performing very similar work, is placed in LS-1.

In smaller organizations or industries such as retail trades, with relatively few organizational levels, the supervisor may have an impact on the policies and major programs of the entire organization, and may deal with important outside contacts, as described in LS-3.

LS-3

Organizational structure is divided into two or more subordinate supervisory levels (of which at least one is a managerial level) with several subdivisions at each level. Executive's program(s) are usually interlocked on a direct and continuing basis with other major organizational segments, requiring constant attention to extensive formal coordination, clearances, and procedural controls. Executive typically has: Financial decisionmaking authority for assigned program(s); considerable impact on the entire organization's financial position or image; and responsibility for, or has staff specialists in, such areas as personnel and administration for assigned organization. Executive plays an important role in determining the policies and major programs of the entire organization, and spends considerable time dealing with outside parties actively interested in assigned program(s) and current or controversial issues.

Level of Secretary's Responsibility (LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor or staff, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at the level best describing their level of responsibility. When a position's duties span more than one LR level, the introductory paragraph at the beginning of each LR level should be used to determine which of the levels best matches the position. (Typically, secretaries performing at the higher levels of responsibility also perform duties described at the lower levels.)

LR-1

Carries out recurring office procedures independently. Selects the guideline or reference which fits the specific case. Supervisor provides specific instructions on new assignments and checks completed work for accuracy. Performs varied duties including or comparable to the following:

a. Responds to routine telephone requests which have standard answers; refers calls and visitors to appropriate staff. Controls mail and assures timely staff response; may send form letters;
b. As instructed, maintains supervisor's calendar, makes appointments, and arranges for meeting rooms;
c. Reviews materials prepared for supervisor's approval for typographical accuracy and proper format;
d. Maintains recurring internal reports, such as: time and leave records, office equipment listings, correspondence controls, training plans, etc.;
e. Requisitions supplies, printing, maintenance, or other services. Types, takes and transcribes dictation, and establishes and maintains office files.

LR-2

Handles differing situations, problems, and deviations in the work of the office according to the supervisor's general instructions, priorities, duties, policies, and program goals. Supervisor may assist secretary with special assignments. Duties include or are comparable to the following:

a. Screens telephone calls, visitors, and incoming correspondence; personally responds to requests for information concerning office procedures; determines which requests should be handled by the supervisor, appropriate staff member, or other offices. May prepare and sign routine, nontechnical correspondence in own or supervisor's name;
b. Schedules tentative appointments without prior clearance. Makes arrangements for conferences and meetings and assembles established background materials, as directed. May attend meetings and record and report on the proceedings;
c. Reviews outgoing materials and correspondence for internal consistency and conformance with supervisor's procedures; assures that proper clearances have been obtained, when needed;
d. Collects information from the files or staff for routine inquiries on office program(s) or periodic reports. Refers nonroutine requests to supervisor or staff;
e. Explains to subordinate staff supervisor's requirements concerning office procedures. Coordinates personnel and administrative forms for the office and forwards for processing.

LR-3

Uses greater judgment and initiative to determine the approach or action to take in nonroutine situations. Interprets and adapts guidelines, including unwritten policies, precedents, and practices, which are not always completely applicable to changing situations. Duties include or are comparable to the following:

a. Based on a knowledge of the supervisor's views, composes correspondence on own initiative about administrative matters and general office policies for supervisor's approval;

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b. Anticipates and prepares materials needed by the supervisor for conferences, correspondence, appointments, meetings, telephone calls, etc;, and informs supervisor on matters to be considered;
c. Reads publications, regulations, and directives and takes action or refers those that are important to the supervisor and staff;
d. Prepares special or one-time reports, summaries, or replies to inquiries, selecting relevant information from a variety of sources such as reports, documents, correspondence, other offices, etc., under general direction;
e. Advises secretaries in subordinate offices on new procedures; requests information needed from the subordinate office(s) for periodic or special conferences, reports, inquiries, etc. Shifts clerical staff to accommodate workload needs.

LR-4

Handles a wide variety of situations and conflicts involving the clerical or administrative functions of the office which often cannot be brought to the attention of the executive. The executive sets the overall objectives of the work. Secretary may participate in developing the work deadlines. Duties include or are comparable to the following:
a. Composes correspondence requiring some understanding of technical matters; may sign for executive when technical or policy content has been authorized;
b. Notes commitments made by executive during meetings and arranges for staff implementation. On own initiative, arranges for staff member to represent organization at conferences and meetings, establishes appointment priorities, or reschedules or refuses appointments or invitations;
c. Reads outgoing correspondence for executive's approval and alerts writers to any conflict with the file or departure from policies or executive's viewpoints; gives advice to resolve the problems;
d. Summarizes the content of incoming materials, specially gathered information, or meetings to assist executive; coordinates the new information with background office sources; draws attention to important parts or conflicts;
e. In the executive's absence, ensures that requests for action or information are relayed to the appropriate staff member; as needed, interprets request and helps implement action; makes sure that information is furnished in timely manner; decides whether executive should be notified of important or emergency matters.

Exclude secretaries performing any of the following duties:
Acts as office manager for the executive's organization, e.g., determines when new procedures are needed for changing situations and devises and implements alternatives; revises or clarifies procedures to eliminate conflict or duplication; identifies and resolves various problems that affect the orderly flow of work in transactions with parties outside the organization.
Prepares agenda for conferences; explains discussion topics to participants; drafts introductions and develops background information and prepares outlines for executive or staff member(s) to use in writing speeches.

Advises individuals outside the organization on the executive's views on major policies or current issues facing the organization; contacts or responds to contacts from high-ranking outside officials (e.g., city or State officials, members of Congress, presidents of national unions or large national or international firms, etc.) in unique situations. These officials may be relatively inaccessible, and each contact typically must be handled differently, using judgment and discretion.

Criteria For Matching Secretaries By Level

Level of Secretary's Supervisor	Level of Secretary's Responsibility			
	LR-1	LR-2	LR-3	LR-4
LS-1	I	II	III	IV
LS-2	I	III	IV	V
LS-3	I	IV	V	V

STENOGRAPHER

(4623: Stenographer)

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings. (If primary duty is transcribing from recordings, see Transcribing-machine typist.)

Excluded from this definition are:

a. Trainee positions not requiring a fully qualified stenographer;
b. Secretaries providing the principal secretarial support in an office and performing more responsible and discretionary tasks, as described in LR-1 through LR-4 in the secretary definition above;
c. Stenographers who take dictation involving the frequent use of a wide variety of technical or specialized vocabulary. Typically this kind of vocabulary cannot be learned in a relatively short period of time, e.g., a month or two;
d. Stenographers, such as shorthand reporters, who record material verbatim at hearings, conferences, or similar proceedings.

Stenographer I

Takes and transcribes dictation, receiving specific assignments along with detailed instructions on such requirements as form and presentation. The transcribed material is typically reviewed in rough draft, and the final transcription is reviewed for conformance with the rough draft. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

Stenographer II

Takes and transcribes dictation determining the most appropriate format. Performs stenographic duties requiring significantly greater independence and responsibility than Stenographer I. Supervisor typically provides general instructions. Work requires a thorough working knowledge of general business and office procedures and of the specific business operations, organizations, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and

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letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions, etc.

TRANSCRIBING-MACHINE TYPIST

(4623: Stenographer)

Primary duty is to type copy of voice recorded dictation which does *not* involve varied technical or specialized vocabulary such as that used in legal briefs or reports on scientific research. May also type from written copy. May maintain files, keep simple records, or perform other relatively routine clerical tasks. (See Stenographer definition for workers involved with shorthand dictation.)

TYPIST

(4624: Typist)

Uses a manual, electric, or automatic typewriter to type various materials. Included are automatic typewriters that are used only to record text and update and reproduce previously typed items from magnetic cards or tape. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Excluded from this definition is work that involves:

a. Typing directly from spoken material that has been recorded on disks, cylinders, belts, tapes, or other similar media;
b. The use of varitype machines, composing equipment, or automatic equipment in preparing material for printing; and
c. Familiarity with specialized terminology in various keyboard commands to manipulate or edit the recorded text to accomplish revisions, or to perform tasks such as extracting and listing items from the text, or transmitting text to other terminals, or using "sort" commands to have the machine reorder material. Typically requires the use of automatic equipment which may be either computer linked or have a programmable memory so that material can be organized in regularly used formats or preformed paragraphs which can then be coded and stored for future use in letters or documents.

Typist I

Performs *one or more of the following:* Copy typing from rough or clear drafts; or routine typing of forms, insurance policies, etc.; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

Typist II

Performs *one or more of the following:* Typing material in final form when it involves combining material from several sources; or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

FILE CLERK

(4696: File clerk)

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions:

File Clerk I

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; and may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

File Clerk II

Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

File Clerk III

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

MESSENGER

(4745: Messenger)

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening mail, distributing mail on a regularly scheduled route or in a familiar area, and other minor clerical work. May deliver mail that requires some special handling, e.g., mail that is insured, registered, or marked for special delivery.

Excluded are positions which include any of the following as significant duties:

a. Operating motor vehicles;
b. Delivering valuables or security-classified mail when the work requires a continuing knowledge of special procedures for handling such items;
c. Weighing mail, determining postage, or recording and controlling registered, insured, and certified mail in the mail room;
d. Making deliveries to unfamiliar or widely separated buildings or points which are not part of an established route; or
e. Directing other workers.

RECEPTIONIST

(4645: Receptionist)

Greets visitors, determines nature of visits, and directs visitors to appropriate persons. Receptionist duties may also include providing information, making appointments, answering a telephone (other than switchboard or console), keeping a log of visitors, and issuing visitor passes. May also perform typing or other routine clerical duties which may occupy a major portion of time, and are usually performed at the reception desk.

This classification excludes workers operating a telephone switchboard or console, performing guard duties, or performing more difficult clerical duties.

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SWITCHBOARD OPERATOR

(4732: Telephone operator)

Operates a telephone switchboard or console used with a private branch exchange (PBX) system to relay incoming, outgoing, and intrasystem calls. May provide information to callers, record and transmit messages, keep record of calls placed and toll charges. Besides operating a telephone switchboard or console, may also type or perform routine clerical work (typing or routine clerical work may occupy the major portion of the worker's time, and is usually performed while at the switchboard or console). Chief or lead operators in establishments employing more than one operator are excluded. For an operator who also acts as a receptionist, see Switchboard operator-receptionist.

SWITCHBOARD OPERATOR-RECEPTIONIST

(4645: Receptionist)

At a single-position telephone switchboard or console, acts both as an operator—see Switchboard operator—and as a receptionist. Receptionist's work involves such duties as greeting visitors; determining nature of visitor's business and providing appropriate information; referring visitor to appropriate person in the organization or contacting that person by telephone and arranging an appointment; keeping a log of visitors.

ORDER CLERK

(4664: Order clerk)

Receives written or verbal customers' purchase orders for material or merchandise from customers or sales people. Work typically involves some combination of the following duties: Quoting prices; determining availability of ordered items and suggesting substitutes when necessary; advising expected delivery date and method of delivery; recording order and customer information on order sheets; checking order sheets for accuracy and adequacy of information recorded; ascertaining credit rating of customer; furnishing customer with acknowledgment of receipt of order; following up to see that order is delivered by the specified date or to let customer know of a delay in delivery; maintaining order file; checking shipping invoice against original order. *Exclude workers paid on a commission basis or whose duties include any of the following:* Receiving orders for services rather than for material or merchandise; providing customers with consultative advice using knowledge gained from engineering or extensive technical training; emphasizing selling skills; handling material or merchandise as an integral part of the job.

Positions are classified into levels according to the following definitions:

Order Clerk I

Handles orders involving items which have readily identified uses and applications. May refer to a catalog, manufacturer's manual, or similar document to insure that proper item is supplied or to verify price of ordered item.

Order Clerk II

Handles orders that involve making judgments such as choosing which specific product or material from the establishment's product lines will satisfy the customer's needs, or determining the price to be quoted when pricing involves more than merely referring to a price list or making some simple mathematical calculations.

ACCOUNTING CLERK

(4712: Bookkeeper and accounting and auditing clerk)

Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts.

Levels I and II require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording of transactions and accounting information. Levels III and IV *require* a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

Accounting Clerk I

Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

Accounting Clerk II

Performs one or more routine accounting clerical operations, such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts, and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

Accounting Clerk III

Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and

applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

Accounting Clerk IV

Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); and/or analyzes and reconciles computer printouts with operating unit reports (contacting units and researching causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience. Supervisor provides suggestions for handling unusual or nonrecurring transactions. Conformance with requirements and technical soundness of completed work are reviewed by the supervisor or are controlled by mechanisms built into the accounting system.

NOTE: Excluded from level IV are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

PAYROLL CLERK

(4713: Payroll and timekeeping clerk)

Performs the clerical tasks necessary to process payrolls and to maintain payroll records. Work involves *most of the following*: Processing workers' time or production records; adjusting workers' records for changes in wage rates, supplementary benefits, or tax deductions; editing payroll listings against source records; tracing and correcting errors in listings; and assisting in preparation of periodic summary payroll reports. In a nonautomated payroll system, computes wages. Work may require a practical knowledge of governmental regulations, company payroll policy, or the computer system for processing payrolls.

KEY ENTRY OPERATOR

(4793: Data entry keyer)

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disk encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions:

Key Entry Operator I

Work is routine and repetitive. Under close supervision or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or interpreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

Key Entry Operator II

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform routine work as described for level I.

NOTE: Excluded are operators above level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

Professional and Technical

COMPUTER SYSTEMS ANALYST, BUSINESS

(1712: Computer systems analyst)

Analyzes business problems to formulate procedures for solving them by use of electronic data processing equipment. Develops a complete description of all specifications needed to enable programmers to prepare required digital computer programs. Work involves *most of the following*: Analyzes subject-matter operations to be automated and identifies conditions and criteria required to achieve satisfactory results; specifies number and types of records, files, and documents to be used; outlines actions to be performed by personnel and computers in sufficient detail for presentation to management and for programming (typically this involves preparation of work and data flow charts); coordinates the development of test problems and participates in trial runs of new and revised systems; and recommends equipment changes to obtain more effective overall operations. (NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or systems analysts primarily concerned with scientific or engineering problems.

For wage study purposes, systems analysts are classified as follows:

Computer Systems Analyst I

Works under immediate supervision, carrying out analyses as assigned, usually of a single activity. Assignments are designed to develop and expand practical experience in the application of procedures and skills required for systems analysis work. For example, may assist a higher level systems analyst by preparing the detailed specifications required by programmers from information developed by the higher level analyst.

Computer Systems Analyst II

Works independently or under only general direction on problems that are relatively uncomplicated to analyze, plan, program, and operate. Problems are of limited complexity because sources of input data are homogeneous and the output data are closely related. (For example, develops systems for maintaining depositor accounts in a bank, maintaining accounts receivable in a retail establishment, or maintaining inventory accounts in a manufacturing or wholesale establishment.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of the data processing systems to be applied. *OR*

Works on a segment of a complex data processing scheme or system, as described for level III. Works independently on routine assignments and receives instruction and guidance on complex assignments. Work is reviewed for accuracy of judgment, compliance with instructions, and to insure proper alignment with the overall system.

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Computer Systems Analyst III

Works independently or under only general direction on complex problems involving all phases of systems analysis. Problems are complex because of diverse sources of input data and multiple-use requirements of output data. (For example, develops an integrated production scheduling, inventory control, cost analysis, and sales analysis record in which every item of each type is automatically processed through the full system of records and appropriate follow-up actions are initiated by the computer.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of new or revised systems of data processing operations. Makes recommendations, if needed, for approval of major systems installations or changes and for obtaining equipment.

May provide functional direction to lower level systems analysts who are assigned to assist.

COMPUTER PROGRAMMER, BUSINESS

(3971: Programmer, business)

Converts statements of business problems, typically prepared by a systems analyst, into a sequence of detailed instructions which are required to solve the problems by automatic data processing equipment. Working from charts or diagrams, the programmer develops the precise instructions which, when entered into the computer system in coded language, cause the manipulation of data to achieve desired results. Work involves *most of the following*: Applies knowledge of computer capabilities, mathematics, logic employed by computers, and particular subject matter involved to analyze charts and diagrams of the problem to be programmed; develops sequence of program steps; writes detailed flow charts to show order in which data will be processed; converts these charts to coded instructions for machine to follow; tests and corrects programs; prepares instructions for operating personnel during production run; analyzes, reviews, and alters programs to increase operating efficiency or adapt to new requirements; maintains records of program development and revisions. (NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or programmers primarily concerned with scientific and/or engineering problems.

For wage study purposes, programmers are classified as follows:

Computer Programmer I

Makes practical applications of programming practices and concepts usually learned in formal training courses. Assignments are designed to develop competence in the application of standard procedures to routine problems. Receives close supervision on new aspects of assignments; and work is reviewed to verify its accuracy and conformance with required procedures.

Computer Programmer II

Works independently or under only general direction on relatively simple programs, or on simple segments of complex programs. Programs (or segments) usually process information to produce data in two or three varied sequences or formats. Reports and listings are produced by refining, adapting, arraying, or making minor additions to or deletions from input data which are readily available. While numerous records may be processed, the data have been refined in prior actions so that the accuracy and sequencing of data can be tested by using a few routine checks. Typically, the program deals with routine recordkeeping operations. *OR*

Works on complex programs (as described for level III) under close direction of a higher level programmer or supervisor. May assist higher level programmer by independently performing less difficult tasks assigned, and performing more difficult tasks under fairly close direction. May guide or instruct lower level programmers.

Computer Programmer III

Works independently or under only general direction on complex problems which require competence in all phases of programming concepts and practices. Working from diagrams and charts which identify the nature of desired results, major processing steps to be accomplished, and the relationships between various steps of the problem solving routine; plans the full range of programming actions needed to efficiently utilize the computer system in achieving desired end products.

At this level, programming is difficult because computer equipment must be organized to produce several interrelated but diverse products from numerous and diverse data elements. A wide variety and extensive number of internal processing actions must occur. This requires such actions as development of common operations which can be reused, establishment of linkage points between operations, adjustments to data when program requirements exceed computer storage capacity, and substantial manipulation and resequencing of data elements to form a highly integrated program.

May provide functional direction to lower level programmers who are assigned to assist.

COMPUTER OPERATOR

(4612: Computer operator)

In accordance with operating instructions, monitors and operates the control console of a digital computer to process data. Executes runs by either serial processing (processes one program at a time) or multiprocessing (processes two or more programs simultaneously). The following duties characterize the work of a computer operator:

a. Studies operating instructions to determine equipment setup needed;
b. Loads equipment with required items (tapes, cards, disks, paper, etc.);
c. Switches necessary auxiliary equipment into system;
d. Starts and operates computer;
e. Responds to operating and computer output instructions;
f. Reviews error messages and makes corrections during operation *or* refers problems;
g. Maintains operating record.

May test-run new or modified programs. May assist in modifying systems or programs. The scope of this definition includes trainees working to become fully qualified computer operators, fully qualified computer operator, and lead operators providing technical assistance to lower level operators. It excludes workers who monitor and operate remote terminals.

For wage study purposes, computer operators are classified as follows:

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Computer Operator I

Work assignments are limited to established production runs (i.e., programs which present few operating problems). Assignments may consist primarily of on-the-job training (sometimes augmented by classroom instruction). When learning to run programs, the supervisor or a higher level operator provides detailed written or oral guidance to the operator before and during the run. After the operator has gained experience with a program, however, the operator works fairly independently in applying standard operating or corrective procedures in responding to computer output instructions or error conditions, but refers problems to a higher level operator or the supervisor when standard procedures fail.

Computer Operator II

In addition to established production runs, work assignments include runs involving new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). At this level, the operator has the training and experience to work fairly independently in carrying out most assignments. Assignments may require the operator to select from a variety of standard setup and operating procedures. In responding to computer output instructions or error conditions, applies standard operating or corrective procedures, but may deviate from standard procedures when standard procedures fail if deviation does not materially alter the computer unit's production plans. Refers the problem or aborts the program when procedures applied do not provide a solution. May guide lower level operators.

Computer Operator III

In addition to work assignments described for Computer operator II (see above) the work of Computer operator III involves at least one of the following:

a. Deviates from standard procedures to avoid the loss of information or to conserve computer time even though the procedures applied materially alter the computer unit's production plans;
b. Tests new programs, applications, and procedures;
c. Advises programmers and subject-matter experts on setup techniques;
d. Assists in (1) maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; and/or (3) switching to emergency backup procedures (such assistance requires a working knowledge of program language, computer features, and software systems).

An operator at this level typically guides lower level operators.

PERIPHERAL EQUIPMENT OPERATOR

(4613: Peripheral equipment operator)

Operates peripheral equipment which directly supports digital computer operations. Such equipment is uniquely and specifically designed for computer applications, but need not be physically or electronically connected to a computer. Printers, plotters, card read/punches, tape readers, tape units or drives, disk units or drives, and data display units are examples of such equipment.

The following duties characterize the work of a peripheral equipment operator:

a. Loading printers and plotters with correct paper; adjusting controls for forms, thickness, tension, printing density, and location; and unloading hard copy;
b. Labeling tape reels, disks, or card decks;
c. Checking labels and mounting and dismounting designated tape reels or disks on specified units or drives;
d. Setting controls which regulate operation of the equipment;
e. Observing panel lights for warnings and error indications and taking appropriate action;
f. Examining tapes, cards, or other material for creases, tears, or other defects which could cause processing problems.

This classification excludes workers (1) who monitor and operate a control console (see Computer operator) or a remote terminal, or (2) whose duties are limited to operating decollaters, bursters, separators, or similar equipment.

COMPUTER DATA LIBRARIAN

(4696: File clerk)

(4754: Stock and inventory clerk)

Maintains library of media (tapes, disks, cards, cassettes) used for automatic data processing applications. The following or similar duties characterize the work of a computer data librarian: Classifying, cataloging, and storing media in accordance with a standardized system; upon proper requests, releasing media for processing; maintaining records of releases and returns, inspecting returned media for damage or excessive wear to determine whether or not they need replacing. May perform minor repairs to damaged tapes.

DRAFTER

(372: Drafting occupation)

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems and other similar equipment, systems, and assemblies. Uses recognized systems of symbols, legends, shadings, and lines having specific meanings in drawings. Drawings are used to communicate engineering ideas, designs, and information in support of engineering functions.

The following are excluded when they constitute the primary purpose of the job:

a. Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;
b. Illustrating work requiring artistic ability;
c. Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;
d. Cartographic work involving the preparation of maps or plats and related materials, and drawings of geological structures; and
e. Supervisory work involving the management of a drafting program or the supervision of drafters.

Positions are classified into levels on the basis of the following definitions.

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Drafter I

Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spot-checked during progress and reviewed upon completion.

NOTE: Exclude drafters performing elementary tasks while receiving training in the most basic drafting methods.

Drafter II

Prepares drawings of simple, easily visualized parts of equipment from sketches or marked-up prints. Selects appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

Drafter III

Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

Drafter IV

Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most appropriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturers' catalogs, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

NOTE: Exclude drafters performing work of similar difficulty to that described at this level but who provide support for a variety of organizations which have widely differing functions or requirements.

Drafter V

Works closely with design originators, preparing drawings of unusual, complex or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

ELECTRONICS TECHNICIAN

(3711: Electrical and electronic engineering technologist and technician)
(615: Electrical and electronic equipment repairer)

Works on various types of electronic equipment and related devices by performing one or a combination of the following: Installing, maintaining, repairing, overhauling, troubleshooting, modifying, constructing, and testing. Work requires practical application of technical knowledge of electronics principles, ability to determine malfunctions, and skill to put equipment in required operating condition.

The equipment—consisting of either many different kinds of circuits or multiple repetition of the same kind of circuit—includes, but is not limited to, the following: (a) Electronic transmitting and receiving equipment (e.g., radar, radio, television, telephone, sonar, navigational aids), (b) digital and analog computers, and (c) industrial and medical measuring and controlling equipment.

This classification excludes repairers of such standard electronic equipment as common office machines and household radio and television sets; production assemblers and testers; workers whose primary duty is servicing electronic test instruments; technicians who have administrative or supervisory responsibility; and drafters, designers, and professional engineers.

Positions are classified into levels on the basis of the following definitions:

Electronics Technician I

Applies working technical knowledge to perform simple or routine tasks in working on electronic equipment, following detailed instructions which cover virtually all procedures. Work typically involves such tasks as: Assisting higher level technicians by performing such activities as replacing components, wiring circuits, and taking test readings; repairing simple electronic equipment; and using tools and common test instruments (e.g., multimeters, audio signal generators, tube testers, oscilloscopes). Is not required to be familiar with the interrelationships of circuits. This knowledge, however, may be acquired through assignments designed to increase competence (including classroom training) so that worker can advance to higher level technician.

Receives technical guidance, as required, from supervisor or higher level technician. Work is typically spot-checked, but is given detailed review when new or advanced assignments are involved.

Electronics Technician II

Applies comprehensive technical knowledge to solve complex problems (i.e., those that typically *can* be solved solely by properly interpreting manufacturers' manuals or similar documents) in working on electronic equipment. Work involves: A familiarity with the interrelationships of circuits; and judgment in determining work sequence and in selecting tools and testing instruments, usually less complex than those used by the level III technician.

Receives technical guidance, as required, from supervisor or higher level technician, and work is reviewed for specific compliance with accepted practices and work assignments. May provide technical guidance to lower level technicians.

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Electronics Technician III

Applies advanced technical knowledge to solve unusually complex problems (i.e., those that typically *cannot* be solved solely by reference to manufacturers' manuals or similar documents) in working on electronic equipment. Examples of such problems include location and density of circuitry, electromagnetic radiation, isolating malfunctions, and frequent engineering changes. Work involves: A detailed understanding of the interrelationships of circuits; exercising independent judgment in performing such tasks as making circuit analyses, calculating wave forms, tracing relationships in signal flow; and regularly using complex test instruments (e.g., dual trace oscilloscopes, Q-meters, deviation meters, pulse generators).

Work may be reviewed by supervisor (frequently an engineer or designer) for general compliance with accepted practices. May provide technical guidance to lower level technicians.

REGISTERED INDUSTRIAL NURSE

(29: Registered nurse)

A registered nurse gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve *a combination of the following*: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel. Nursing supervisors or head nurses in establishments employing more than one nurse are excluded.

Maintenance, Toolroom, and Powerplant

MAINTENANCE CARPENTER

(6422: Carpenter)

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood in an establishment. Work involves *most of the following*: Planning and laying out of work from blueprints, drawings, models, or verbal instructions; using a variety of carpenter's handtools, portable power tools, and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE ELECTRICIAN

(615: Electrical and electronic equipment repairer)
(6432: Electrician)

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an establishment. Work involves *most of the following*: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE PAINTER

(6442: Painter, construction and maintenance)

Paints and redecorates walls, woodwork, and fixtures of an establishment. Work *involves the following*: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. In general, the work of the maintenance painter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MACHINIST

(613: Industrial machinery repairer)

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves *most of the following*: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for this work; and fitting and assembling parts into mechanical equipment. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MECHANIC (MACHINERY)

(613: Industrial machinery repairer)

Repairs machinery or mechanical equipment of an establishment. Work involves *most of the following*: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shops; reassembling machines; and making all necessary adjustments for operation. In general, the work of a machinery maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose *primary duties* involve setting up or adjusting machines.

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MAINTENANCE PIPEFITTER

(645: Plumber, pipefitter, and steamfitter)

Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves *most of the following*: Laying out work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer or oxyacetylene torch or pipe-cutting machines; threading pipe with stocks and dies; bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe required; and making standard tests to determine whether finished pipes meet specifications. In general, the work of the maintenance pipefitter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. *Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.*

MILLWRIGHT

(6178: Millwright)

Installs new machines or heavy equipment, and dismantles and installs machines or heavy equipment when changes in the plant layout are required. Work involves *most of the following*: Planning and laying out work; interpreting blueprints or other specifications; using a variety of handtools and rigging; making standard shop computations relating to stresses, strength of materials, and centers of gravity; aligning and balancing equipment; selecting standard tools, equipment, and parts to be used; and installing and maintaining in good order power transmission equipment such as drives and speed reducers. In general, the millwright's work normally requires a rounded training and experience in the trade acquired through a formal apprenticeship or equivalent training and experience.

MOTOR VEHICLE MECHANIC

(611: Vehicle and mobile equipment mechanic and repairer)

Repairs, rebuilds, or overhauls major assemblies of internal combustion automobiles, buses, trucks, or tractors of an establishment. Work involves most of the following: Diagnosing the source of trouble and determining the extent of repairs required; replacing worn or broken parts such as piston rings, bearings, or other engine parts; grinding and adjusting valves; rebuilding carburetors; overhauling transmissions; and repairing fuel injection, lighting, and ignition systems. In general, the work of the motor vehicle mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

This classification does not include mechanics who repair customers' vehicles or who only perform minor repair and tuneup of motor vehicles. It does, however, include fully qualified journeymen mechanics even though most of their time may be spent on minor repairs and tuneups.

GENERAL MAINTENANCE WORKER

(6179: Mechanic and repairer, not elsewhere classified)

Performs general maintenance and repair of building structures and their mechanical, electrical, or sanitary systems. May also perform general maintenance and repair of the establishment's machinery. Work requires a basic practical knowledge of several maintenance trades in order to perform most of the following: Keeping in good repair building woodwork; replacing electrical switches, fixtures, and motors; occasional painting or touching up of structure or equipment; repairing or replacing plumbing fixtures; and replacing broken window panes.

Excluded are positions requiring a formal apprenticeship or equivalent training in one or more crafts. Also excluded are workers participating in such a program.

MAINTENANCE TRADES HELPER

(863: Helper; mechanic and repairer)

(864: Helper; construction trades)

Assists one or more workers in the skilled maintenance trades by performing specific or general duties of lesser skill, such as keeping a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade: In some trades the helper is confined to supplying, lifting, and holding materials and tools, and cleaning working areas; and in others he is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

MACHINE-TOOL OPERATOR (TOOLROOM)

(6813: Machinist)

(731-2: Metalworking and plasticworking machine setup operator)

Specializes in operating one or more than one type of machine tool (e.g., jig borer, grinding machine, engine lathe, milling machine) to machine metal for use in making or maintaining jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves*: Planning and performing difficult machining operations which require complicated setups or a high degree of accuracy; setting up machine tool or tools (e.g., install cutting tools and adjust guides, stops, working tables, and other controls to handle the size of stock to be machined; determine proper feeds, speeds, tooling, and operation sequence or select those prescribed in drawings, blueprints, or layouts); using a variety of precision measuring instruments; making necessary adjustments during machining operation to achieve requisite dimensions to very close tolerances. May be required to select proper coolants and cutting and lubricating oils, to recognize when tools need dressing, and to dress tools. In general, the work of a machine-tool operator (toolroom) at the skill level called for in this classification requires extensive knowledge of machine-shop and toolroom practice usually acquired through considerable on-the-job training and experience.

For cross-industry wage study purposes, this classification does *not* include machine-tool operators (toolroom) employed in tool and die jobbing shops.

TOOL AND DIE MAKER

(6811: Tool and die maker)

Constructs and repairs jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves*: Planning and laying out work according to models, blueprints, drawings, or other written or oral specifications; understanding the working properties of common metals and alloys; selecting appropriate materials, tools, and processes required to complete task; making necessary shop computations; setting up and operating various machine tools and related equipment; using various tool and die maker's handtools and precision measuring instruments; working to very close

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tolerances; heat-treating metal parts and finished tools and dies to achieve required qualities; fitting and assembling parts to prescribed tolerances and allowances. In general, the tool and die maker's work requires rounded training in machine-shop and toolroom practice usually acquired through formal apprenticeship or equivalent training and experience.

For cross-industry wage study purposes, this classification does *not* include tool and die makers who (1) are employed in tool and die jobbing shops or (2) produce forging dies (die sinkers).

STATIONARY ENGINEER

(6931: Stationary engineer)

Operates and maintains one or more systems which provide an establishment with such services as heat, air-conditioning (cool, humidify, dehumidify, filter, and circulate air), refrigeration, steam or high-temperature water, or electricity. Duties involve: Observing and interpreting readings on gauges, meters, and charts which register various aspects of the system's operation; adjusting controls to insure safe and efficient operation of the system and to meet demands for the service provided; recording in logs various aspects of the system's operation; keeping the engines, machinery, and equipment of the system in good working order. May direct and coordinate activities of other workers (not stationary engineers) in performing tasks directly related to operating and maintaining the system or systems.

The classification excludes head or chief engineers in establishments employing more than one engineer; workers required to be skilled in the repair of electronic control equipment; workers in establishments producing electricity, steam, or heated or cooled air primarily for sale; and boiler tenders.

Material Movement and Custodial

TRUCKDRIVER

(821: Motor vehicle operator)

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or workers between various types of establishments such as: Manufacturing plants, freight depots, warehouses, wholesale and retail establishments, or between retail establishments and customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order. *Salesroute and over-the-road drivers are excluded.*

For wage study purposes, truckdrivers are classified by type and rated capacity of truck, as follows:

Truckdriver, light truck
(straight truck, under 1 1/2 tons, usually 4 wheels)
Truckdriver, medium truck
(straight truck, 1 1/2 to 4 tons inclusive, usually 6 wheels)
Truckdriver, heavy truck
(straight truck, over 4 tons, usually 10 wheels)
Truckdriver, tractor-trailer

SHIPPER AND RECEIVER

(4753: Traffic, shipping and receiving clerk)

Performs *clerical and physical* tasks in connection with shipping goods of the establishment in which employed and receiving incoming shipments. In performing day-to-day, routine tasks, follows established guidelines. In handling unusual nonroutine problems, receives specific guidance from supervisor or other officials. May direct and coordinate the activities of other workers engaged in handling goods to be shipped or being received.

Shippers typically are responsible for most of the following: Verifying that orders are accurately filled by comparing items and quantities of goods gathered for shipment against documents; insuring that shipments are properly packaged, identified with shipping information, and loaded into transporting vehicles; preparing and keeping records of goods shipped, e.g., manifests, bills of lading.

Receivers typically are responsible for most of the following: Verifying the correctness of incoming shipments by comparing items and quantities unloaded against bills of lading, invoices, manifests, storage receipts, or other records; checking for damaged goods; insuring that goods are appropriately identified for routing to departments within the establishment; preparing and keeping records of goods received.

For wage study purposes, workers are classified as follows:

Shipper
Receiver
Shipper and receiver

WAREHOUSEMAN

(4754: Stock and inventory clerk)

As directed, performs a *variety* of *warehousing* duties which require an *understanding of the establishment's storage plan*. Work involves *most of the following*: Verifying materials (or merchandise) against receiving documents, noting and reporting discrepancies and obvious damages; routing materials to prescribed storage locations; storing, stacking, or palletizing materials in accordance with prescribed storage methods; rearranging and taking inventory of stored materials; examining stored materials and reporting deterioration and damage; removing material from storage and preparing it for shipment. May operate hand or power trucks in performing warehousing duties.

Exclude workers whose *primary* duties involve shipping and receiving work (see Shipper and receiver and Shipping packer), order filling (see Order filler), or operating power trucks (see Power-truck operator).

ORDER FILLER

(4754: Stock and inventory clerk)

Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specifications on sales slips, customers' orders, or other instructions. May, in addition to filling orders and indicating items filled or omitted, keep records of outgoing orders, requisition additional stock or report short supplies to supervisor, and perform other related duties.

SHIPPING PACKER

(8761: Hand packer and packager)

Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and

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number of units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and *may involve one or more of the following*: Knowledge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; and applying labels or entering identifying data on container. *Packers who also make wooden boxes or crates are excluded.*

MATERIAL HANDLING LABORER

(8726: Freight, stock, and material mover, not elsewhere classified)

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve *one or more of the following*: Loading and unloading various materials and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; and transporting materials or merchandise by handtruck, car, or wheelbarrow. *Longshore workers, who load and unload ships, are excluded.*

POWER-TRUCK OPERATOR

(8318: Industrial truck and tractor equipment operator)

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment.

For wage study purposes, workers are classified by type of powertruck, as follows:

Forklift operator

Power-truck operator (other than forklift)

GUARD

(5144: Guard and police, except public service)

Protects property from theft or damage, or persons from hazards or interference. Duties involve serving at a fixed post, making rounds on foot or by motor vehicle, or escorting persons or property. May be deputized to make arrests. May also help visitors and customers by answering questions and giving directions.

Guards employed by establishments which provide protective services on a contract basis are included in this occupation.

For wage study purposes, guards are classified as follows:

Guard I

Carries out instructions primarily oriented toward insuring that emergencies and security violations are readily discovered and reported to appropriate authority. Intervenes directly only in situations which require minimal action to safeguard property or persons. Duties require minimal training. Commonly, the guard is not required to demonstrate physical fitness. May be armed, but generally is not required to demonstrate proficiency in the use of firearms or special weapons.

Guard II

Enforces regulations designed to prevent breaches of security. Exercises judgment and uses discretion in dealing with emergencies and security violations encountered. Determines whether first response should be to intervene directly (asking for assistance when deemed necessary and time allows), to keep situation under surveillance, or to report situation so that it can be handled by appropriate authority. Duties require specialized training in methods and techniques of protecting security areas. Commonly, the guard is required to demonstrate continuing physical fitness and proficiency with firearms or other special weapons.

JANITOR, PORTER, OR CLEANER

(5244: Janitor and cleaner)

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve *a combination of the following*: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms. *Workers who specialize in window washing are excluded.*

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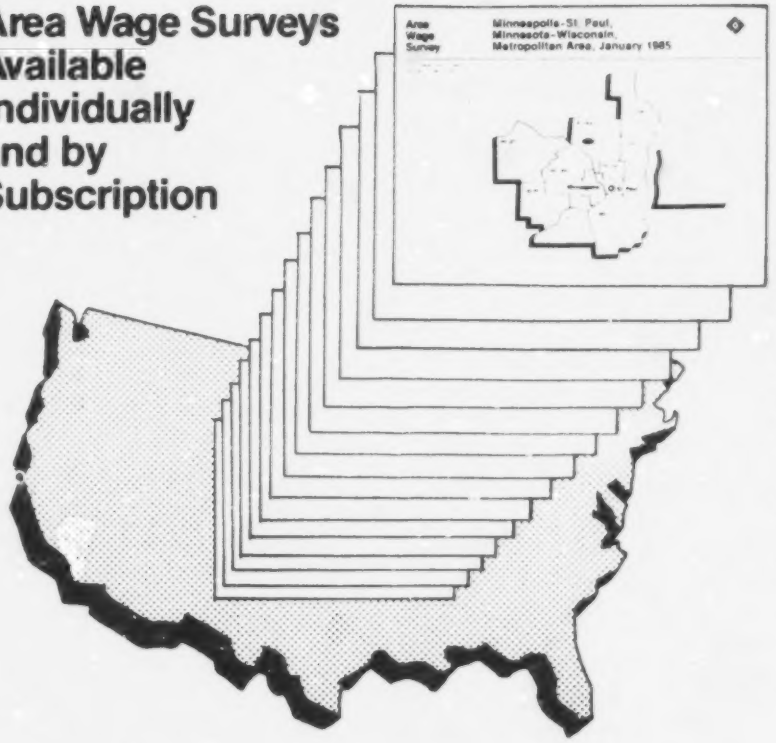

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